

Manufacturers Record

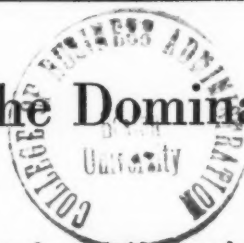
Exponent of America



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Baltimore, Md.
MARCH 8, 1923

The Nation Must Be Saved from the Domination of Union Miners



For some years the non-union coal mines of West Virginia, Virginia, Kentucky and Alabama have saved this nation from a complete domination by union coal mining interests. Practically the entire fight of the union coal people has been centered upon breaking down the independent miners of these states in order to secure domination of the entire coal trade of the country, to the damnation of the nation.

The independent coal miners in Alabama, West Virginia, Virginia and Kentucky have been life-savers to this country. They made it possible for many manufacturing plants and railroads to operate when they would have been shut down if union mining had had complete control over the situation. It is of supreme importance to the country that the fight which has been made by the union miners against the independent or non-union mining operations should not succeed. Every man, woman and child in the country is vitally interested in this, for if the unions should gain control of all the coal mines they could, whenever it suited their convenience, stop every wheel that turns on railroads or in factories and shut off the supply of coal and freeze and starve the nation into submission. That is a power so vast, so terrific in its opportunities for evil, that it behooves the country to watch with extreme care every move made in this campaign against non-union mining operations.

The recently appointed Coal Commission in its first report, as lately shown in the Manufacturers Record, displayed its utter, hopeless incapacity to deal with facts regarding the coal trade, for, as we pointed out, practically every new statement made by it was incorrect and other statements were not new. No man can tell what such a commission might do, but the country should take warning in advance and see that it does not encourage any radicalism in the coal trade or make any move which would inure to the benefit of the union miners as against the non-union miners.

Every bit of help given to the union mining interests places a club in their hands which might, literally, beat the very brains and life out of the country. It is, therefore, essential that the work of the commission and the work of the union miners, as the latter carry on their propaganda in every direction, should be watched with extreme care and no effort on the part of the people at large should be spared in the fight to keep union mining interests from destroying the non-union interests.

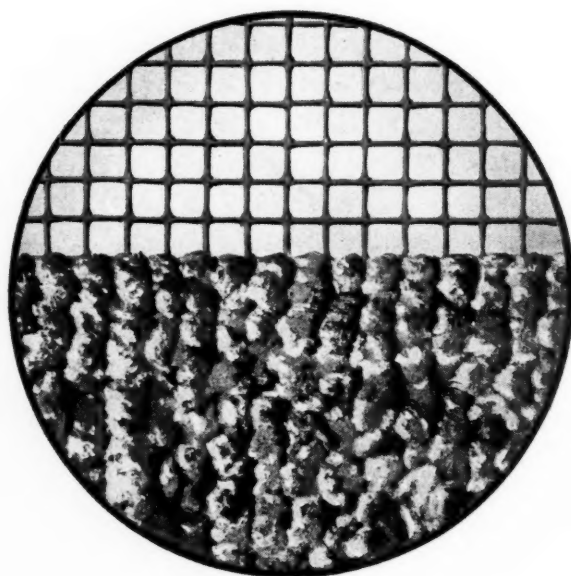
In the protection of the non-union mines there is safety for the life of the nation, while the success of the union mining interests would be certain death to the nation's welfare and to its freedom from complete and absolute domination by one of the most desperate labor organizations which this or any other country has ever known.

Judging by their past record union miners would not for a moment hesitate to shut down every coal mine, every railroad and every factory in the country in order to accomplish their purpose of the domination of the entire coal trade. The great bulk of these union miners are of the lower class of foreigners, who have more money and more comforts than they ever had in their own countries. To these rank socialistic elements many of the weak-minded parlor Bolsheviks would give free license to freeze the people of the country to death.

In this case as in others, eternal vigilance is the price of liberty, and without eternal vigilance there can be no safety for the liberty of the people of this country in the matter of a fuel supply upon which the nation's business life depends.

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MARCH 8, 1923



Volume LXXXIII

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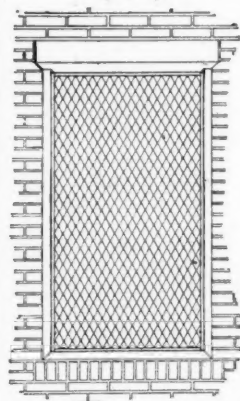
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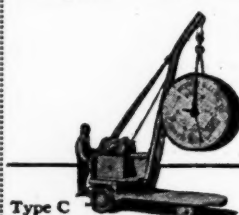
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PRESIDENT STOREY, OF THE ATCHISON, TOPEKA AND SANTA FE SYSTEM, SUGGESTS THAT RAILROADS SHOULD SPEND \$1,500,000,000 ANNUALLY FOR EXTENSIONS AND IMPROVEMENTS.

IN reply to an inquiry as to his views in regard to the amount of money that should be expended by railroads for expansion and improvements, President W. B. Storey, of the Atchison, Topeka & Santa Fe Railway Co., writes the MANUFACTURERS RECORD as follows:

"I have made no detailed studies of the needs of other roads. So far as the Santa Fe is concerned I made the statement shortly after the return of the railroads from Federal to private control that we ought to spend \$60,000,000 a year for three years in order to put our plant in shape to handle the traffic of our territory. We have not been able to expend on any such scale as this, although our program for 1923 approaches this figure. Our actual authorizations will considerably exceed it, but our actual expenditure will probably fall somewhat short. I should be disposed to assume that the railroads as a whole ought to spend rather more money than the Santa Fe on an average, as the majority of them have not been able to do as much to improve their plants as we have done. This would mean that expenditures for new equipment, improvements and extensions for all of the railroads of the country ought to total for the present about one and one-half billion dollars annually."

We believe that President Storey states the case very conservatively when he points out the need of spending \$1,500,000,000 a year for railroad expansion. Some way must be found to provide that money for the good of the country.

ADEQUATE TRANSPORTATION CAN BE SECURED ONLY BY FULL DEVELOPMENT OF WATER WAYS.

THE vastness of water traffic, and more especially that which is carried on the Lakes through the "Soo" Canal, is very strikingly presented in a letter to the MANUFACTURERS RECORD from Mr. Charles P. Craig, Executive Director of the Great Lakes—St. Lawrence Tidewater Association. In the course of his letter Mr. Craig gives the following extremely interesting and suggestive figures showing the magnitude of this traffic when expressed in ton miles:

"The largest recorded movement through the 'Soo' Canal was 91,000,000 tons. I take the figures for 1917 because they happen to be convenient, when the total movement was \$89,813,898. The statistical report of commerce of the Sault Ste. Marie canals for that year gives the following figure for total ton miles: 73,634,549,794.

"That is, the maximum tonnage at the 'Soo' is approximately 90,000,000 and the ton mileage is approximately 75,000,000,000.

"The average distance is 830 miles.

"In a 90,000,000-ton movement, about 60,000,000 tons is iron ore from Lake Superior. Eighty per cent of that comes from Minnesota, and 20 per cent from Michigan.

"The movement is more than 75 per cent Lake Erie, less than 25 per cent Lake Michigan.

"I worked out an approximation and found a total ore movement of 49,200,000,000 ton miles, which checks very closely with the official figures for the total commodity movement through the 'Soo.'

"When the 'Soo' tonnage is 90,000,000 tons, the total for the lakes is 125,000,000. That includes local movement on Lake Michigan, local movement on Lake Erie, Lake Michigan to Georgian Bay, Lake Michigan to Lake Erie, in addition to what goes through the 'Soo.'

"The largest figure is ore, with a maximum of about 60,000,000 tons; coal, with a maximum of about 20,000,000, mostly Lake Erie to Lake Superior; and grain, about 5,000,000 tons, mostly Lake Superior to Lake Erie, and Lake Superior to Georgian Bay. Opening the lakes-to-ocean route, by the way, is expected to increase the movement through Lake Michigan and through Toledo from the Southwest.

"At that rate, the total lake movement would be somewhere around 100,000,000,000 ton miles when the movement passing the 'Soo' comes to 75,000,000,000 ton miles.

"The figures compiled at the 'Soo' are more than an approximation—they are as accurate as the railway statistics.

"By the way, this illustrates the fact that water movement is essentially for the most part long-haul movement. The railway movement, which is gradually increasing, is about 175 miles average.

"The opening of the Welland Canal will immediately lengthen by 150 to 200 miles the water haul of the greater part of the grain movement.

"The startling notion occurs to me to translate the service performed by lake vessels passing the 'Soo' into terms of human labor, not in the most primitive form of carrying by hand, but with, let us say, the aid of wheel-barrows.

"Load each wheel-barrow 500 pounds—which is a fairly hefty load. Let every man plod along 3 miles an hour for 8 hours a day—which is a pretty good day's work. You have 300,000,000,000 wheel-barrow miles, and you have 12,000,000,000 wheel-barrow days. If you kept that up the year

around, it would take 33,000,000 men for the one-way movement.

"The entire adult male population of the United States could not, in one year, move what goes through the 'Soo.'"

"That measures the service of the lakes. The lakes-to-ocean service will approximately double not the tonnage, nor even the ton mileage, but the social utility of the way of the Great Lakes.

"There is no rehabilitation of the railways, there is no way of developing the potential resources of the interior, except by reshaping the national transportation system—railways, waterways, and marine—and adjusting it to the service for which each arm of transportation is best suited. There is no way of accomplishing that except by utilizing the deep water base on all four sides of the United States. The improvement of the St. Lawrence which will give ocean-going commerce access to the Great Lakes and will let lake vessels down to the seaboard is the key to the national problem."

"HAVE FAITH IN MASSACHUSETTS."

UNDER the heading, "Have Faith In Massachusetts" the Boston Herald appeals to the people of that State not to be disturbed by some little shifting of industry which is going on, and on that point says:

"Certainly hardheaded business men do not migrate bag and baggage without reason. They have to be shown first, then they act. We must be alert all the time. We must compete. We must 'have faith in Massachusetts.' Our faith is amply justified. Let us remember that a baby will double its stature in a year, while a mature man will merely add a few pounds of weight. Massachusetts has grown up. To maintain her position, energy and initiative are required. But the statistics show that we are maintaining ourselves well in the face of problems that a less sturdy and resourceful people would flinch from facing at all. That we still can do—and still will do."

Bless your heart! Nobody has lost faith in Massachusetts, unless, perhaps, it is some of the cotton mill owners who have been beaten so long by labor agitators in that state that they are turning to the South as a field for investment.

About 28 years ago the same kind of agitation was carried on which is in evidence now and some five or six big cotton mill companies of New England built cotton mills in the South, costing over one million dollars each. The investment in these mills at present has at least doubled the amount originally put in. At that time Massachusetts was stirred by the thought that the entire cotton mill industry was going to move to the South. The MANUFACTURERS RECORD took the position then which it reiterates now. New England will not become poverty-stricken; it will not lose all of its textile industry, even though some mills may be transferred to the South, or rather new mills built in the South by New England companies. New England has always been a thrifty region; its people know how to turn from one industry to another whenever the situation demands it. There was a time when the wealth and energy of New Bedford were centered in the whaling industry and when that disappeared there were some pessimists who thought that New Bedford was doomed. But that city turned to other industries, especially cotton, and is a far richer community than it ever was during the palmy days of the whaling business. Other industries in New England have shifted; some have passed out of existence and some have moved to other points of the country, but New England always meets the emergency and creates a new industry for every one that is lost. The very suggestion or intimation of the Boston Herald that the people of Massachusetts should not lose faith in their state is on its face an affront to the creative geniuses who on a barren rock-bound shore have built up industrial and financial interests amazing in extent and variety and in influence upon national life.

Massachusetts appealing for faith! The very suggestion is an insult to the State. The Boston Herald need not attempt

to argue the people of that state into faith. They already have it. It is a regnant, dominant faith. It is a faith backed by energy which achieves great things against any odds. It is the faith of a living, virile people whose ancestors wrought marvels which have been more than matched by the people of the present generation. Some cotton mill investments will be made in the South by New England people; some New England cotton mill companies will do as others are doing—build mills in the South—and it is quite possible that they will go on doing this to the great benefit of the entire country. For without the fullest development of the resources of the South there cannot be complete rounding out of national life. Until New England people come in immediate touch, through their pocketbooks, with the opportunities and resources of the South they will have no adequate comprehension of what the full development of the South would mean for the enrichment of the country.

If New England should lose some of its textile interests and some of its textile machinery industry, no one for a moment need imagine that New England will not make two factories to grow wherever one factory stands today, and for every industry lost, it will create others. Its wealth is increasing at a rate so tremendous, its savings banks deposits are accumulating so rapidly that through this immense control of capital it can invest its money broadly in all parts of the country and bring back the earnings for the enrichment of all New England. Away then on the part of New England people of any pessimism! New England mill companies may build mills in the South and buy a few mills, ultimately a few hundreds of millions of New England capital may seek investment in the South, but that will all enrich, not impoverish New England. For more than fifty years New England capital has gone into the West and into other regions and has brought back the spoils of its hunting campaign in larger dividends than this money could have earned at home, and thus New England has been enriched while its money has been developing other regions.

AN INTERESTING SIDELIGHT FROM A "WET" UPON THE EASTWARD MOVEMENT OF PROHIBITION.

STARTING out with the statement that he "is wet, always has been wet, and always shall be, and that all of his best friends are wet," Mr. Jack O'Donnell in a letter in a recent issue of Collier's admits that the movement from the West to the East in behalf of Prohibition is rapidly gaining ground. His statements are worth considering by those who think that the Prohibition movement is not making progress. In closing his article he says:

"The great mid-West is joining hands with the Far West and the South in the movement to make America bone dry. The Eighteenth Amendment is an accepted fact almost everywhere west of the Allegheny Mountains. Iowa, Nebraska, Kansas, the Dakotas, Wisconsin, Minnesota, Oklahoma, Arkansas, Tennessee, and other states that I visited in the last few months are dry—the sentiment is dry, and there is a growing respect for the Volstead Act. None of these states is bone dry as yet, but they are on their way.

"I was loath to admit it even to myself, but there is an abundance of evidence that a great 'dry wave' is rolling eastward, slowly but surely grinding down opposition to Prohibition. And, riding the crest of this wave, are the clean, substantial citizens of the nation—the John Smiths and the Tom Browns—and, always, their wives and sisters and mothers are riding at their sides.

"Some day we wets are going to awaken to find that an overwhelming majority of the people of the United States are weary of bootleggers and dry-law violators. Some day, and that day is not far distant, these people are going to rid the country of the bootlegger and the rum runner just as the Vigilantes of the fifties rid the California mining camps of undesirable gamblers, gunmen, and prostitutes."

Has Morehouse Parish, La., Been Maligned by Sensationalism? Men of Standing Insist That It Has Been—The Curse of Hooded Mobs.

MANY readers of the MANUFACTURERS RECORD are rushing to the defense of the people of Mer Rouge. Some claim that the statements sent out in regard to the activities in that community, of the Ku Klux Klan are greatly exaggerated. Some deny that there has been any proof of the statements alleged in these dispatches.

It is needless to say that the MANUFACTURERS RECORD wants to know the truth. It is absolutely opposed to any movement of men who under disguise undertake to enforce their views on other people, whether their views be merely political or expressed in an attempt to punish what they think is criminality, but by illegal means. If the Mer Rouge district can prove that hooded men did not commit any of the crimes charged against them; did not waylay people and did not by secret methods of terrorism drive any people out of the community or maltreat them, no one would more greatly rejoice to make that fact known than the MANUFACTURERS RECORD.

Among the letters received by this paper is one from Mr. Wm. B. Reily, one of the leading business men of New Orleans. It is as follows:

"No man in our whole South will come nearer giving any Southern people—state, county or vicinity—a squarer deal than your good self.

"I know.

"An article on this subject in the last issue of your good magazine prompts me to send you the enclosed newspaper clipping that gives the true condition of affairs in Morehouse parish. My many years residence in that parish makes me know the people and there are none better in the whole world.

"I have known Mr. Madison all his life and everything that this paper says of him is true. He is in every sense a clean-cut Christian gentleman and by long odds the leading citizen of Morehouse parish—looked up to and respected by all.

"Won't you kindly publish this clipping in justice to the people of that parish?"

The article which the MANUFACTURERS RECORD is asked to publish is one from the News Star of Monroe, La., giving the views of Mr. Madison so highly commended by Mr. Riley and by others. That article is as follows:

[From News-Star, Monroe, La.]

HOT-HEADS RESPONSIBLE SAYS H. FLOOD MADISON

Bastrop, La., Jan. 13.—Through the troubles the Ku Klux Klan has brought to Morehouse parish, the office of one man has been the shrine to which went men of both klan and anti-klan, in the serene assurance that they could find there the counsel of a friend. That man's name appears in the list of every one of the "peace conferences" in which the calmer and more responsible men of the parish sought to smooth over the troubles that the hot-heads of the parish were breeding.

He sits day by day in a one-story brick lawyer's office on Bastrop's court house square, that man. All Louisiana has heard his name H. Flood Madison.

He speaks today in an interview to The Shreveport Times, speaks to the world on behalf of Morehouse parish, Louisiana. He served Louisiana as a delegate to the constitutional con-

vention of 1913, and served in the constitutional convention of 1921. He has been chairman of the Morehouse parish Democratic executive committee so long he does not remember when he first accepted the post. He was recently elected a member of the Louisiana State Board of Education. He practices law religiously.

And he says to the world:

"I hate to see Morehouse parish branded as the home of human hyenas and gun-toting desperadoes, when the trouble in which we are now involved can be centered on about 15 men in the parish of 20,000 population.

"The whole trouble today started with a small group of hot-heads, klan and anti-klan. There is no enmity between the business people of Mer Rouge and Bastrop, either personally or otherwise.

"Striking evidence of it is that since all this trouble came on, the parish has voted a \$1,150,000 bond issue for a parish-wide system of good roads and Mer Rouge and Bastrop were almost unanimous for it. The two communities co-operated to the limit.

"Take our school situation, it compares favorably with any parish in Louisiana, we have three approved high schools, a \$150,000 one at Bastrop, a \$60,000 one at Mer Rouge, a \$60,000 one at Oak Ridge, modern brick buildings, all with modern equipment. Collinston has a fine brick school, the McGinty neighborhood a fine brick school, Bonita a commodious brick school and Bonne Idee is building a brick school now. In other of our communities are commodious school buildings with modern equipment.

"We give nine months of free public schooling every year, throughout the parish. We pay good salaries to our teachers.

"In Bastrop we have a colored industrial school where the parish's own colored boys and girls are trained to teach in our parish colored schools.

"Our parish population is 20,000, about 75 per cent negro. Cotton is our big crop, with big plantations and a large force of negro labor.

"But considering the number of educated white children in the parish, our school system compares favorably with any other parish in Louisiana.

"During the world war this parish bought and paid for \$750,000 in war savings stamps and Liberty Bonds. Our young men rushed to colors, enlisting and going to officers' training camps. Hundreds of our white boys and girls are away at colleges and universities.

"Politically the parish is nearly always solid. There are no political animosities.

"We have virtually no criminal situation, beyond this present affair. The last five or six years' practically all our crimes have been misdemeanors. I only recall two white homicides in the past two or three years, aside from the present case. One was a non-resident. The other was a dope fiend.

"If one lawyer had all the fees for criminal practice in this parish for the last 10 years, he and his family would starve. They are negligible.

"It's a public spirited community. We operate in Bastrop on the town meeting plan. Recently, when a pulp mill wanted to come here, we bought a \$7500 site and gave it to the company. We did the same for the ice factory and the glass factory. We took \$10,000 in the A. & L. M. railroad's re-organization bonds. We've put out at least \$25,000 in such projects in the last two or three years.

"The plantations are owned by pioneer stock, largely the best in America, from Virginia, the Carolinas, and such old states.

"The hill folk are of the same stock. They're splendid people. I don't know a person in this parish I can't speak to cordially and receive a cordial answer.

"I've fought crime and lawlessness all my life. But I never had to put on a mask to do it. You may have noticed we have no pool hall in Bastrop. We had one once. It violated laws. We called a meeting and passed an anti-pool room law. That's the way I handle it."

And that explains somewhat why all sides come to Flood Madison. He sits in his brick country lawyer's office, tall, spare, with lined ascetic face that reminds you a bit of Abraham Lincoln. With dark clothes, old fashioned high

stiff collar, with fine, scholarly hands and a heavy shock of slightly graying dark hair.

"We're not all human hyenas," he says.

You can't help but believe him.

Another letter received is the following:

Monroe Chamber of Commerce

Monroe, La., Feb. 16, 1923.

Editor Manufacturers Record:

I am enclosing you renewal card filled out for an extension of our subscription for another 12 months.

I wish to say that we esteem this journal very highly. We feel that its work along the lines it follows; namely, industrial and manufacturing, is paramount in this field. We also very heartily commend the stand taken by the editorial department on public questions.

I would only make this comment relative to an editorial you had some time ago in reference to the Mer Rouge matter—being in the neighboring parish to us—that you took it for granted that the newspaper reports in reference to this matter were the truth; when as a matter of fact, the truth contained in these reports is only comparable to a few grains of wheat in tons of chaff. It is not now an established fact that any such crimes have been committed as have been reported in this parish. I think that your valuable journal was premature in its comments on this matter.

So far as law-abiding citizenship is concerned, there is no section of country in the South where the people are more law-abiding and high-minded than those in Morehouse Parish. There is a tough element in that parish, and has been for time immemorial, but this element is only in a small minority. We are very hopeful that the truth of this matter will be arrived at when we get a real trial of this matter, which will take place within the next thirty days—when both sides of this controversy will be heard in open court; but we realize that the policy of your journal is and has been for these things just as strongly as you do.

I wish to say further that I think the MANUFACTURERS RECORD is at present one of the most influential journals in its stand for that which is right that is now published in America.

S. M. COLLINS,
Secretary.

PRAISE IS SOMETIMES BETTER THAN COMPLAINT

IN a little publication issued by the Pennsylvania Railroad entitled "The Pennsylvania Standard," the following appears:

"A Tribute to 'One Man in a Thousand.'"

"C. H. Markham, President of the Illinois Central System, writes to General W. W. Atterbury, Vice-President in Charge of Operation, as follows:

"On the Illinois Central we pride ourselves on personal service and attention that is given by our employees to patrons of the road. I don't believe, however, that we have ever had anything that can beat an occurrence to which my attention was called on the platform at North Philadelphia while waiting for the "Broadway" last Saturday.

"A rather plainly dressed woman asked the station master if she could get a newspaper. He said there were none for sale on the platform, but he would get one for her. He then called a porter, who took the woman's two cents, went down to the news stand and got the paper for her.

"In 999 cases out of a thousand of this kind an employee of the railroad in the position of the station master would probably have told the woman where she could find a newspaper and let it go at that, but your representative was the one in a thousand."

"This letter refers to H. L. Brown, station master at North Philadelphia."

It is interesting from two points of view. It is interesting in showing the spirit of humanity which animates President Markham of the Illinois Central, for this shows that he is not only observant of what is taking place but that he has that spirit of kindness which prompts him to pay tribute to an unknown man merely because that unknown man had done a kindly deed to some one else. We are all

prone to criticise mistakes and unkindness and lack of politeness when found in public service corporations, but we are not always as ready as Mr. Markham was to take time to speak a good word for the man seen doing a kindly thing and to send word to the manager of the good deed that was done. Travelers on dining cars are always ready, like most people who are human, to criticise the food if it is not well cooked and well served, but they are not always as ready to speak a word of appreciation to the waiter and to the superintendent of the car when the meal is good and is well served.

And yet how many a burden would be lifted from tired brains and hearts if in going through the world we should always be ready to express appreciation of the kindly deed that is done to us or seen by us or to the working man whether he be a Pullman porter or a dining car waiter, a day laborer or a mechanic, for what has been contributed to our comfort.

Nearly all people are inclined to criticise something that the minister of the gospel may have said which did not appeal to them but how few tell the minister of the good thing that did appeal to them? Many a time the writer, after a great sermon or a good public address that should have lifted people into a higher realm of thought, has been chagrined to see everybody turn around and walk out of the church or hall without even a single expression to the tired preacher or speaker. There is an old legend which fits into this and into most cases in life. The legend runs to this effect: In heaven there are two angels sent out every day, one bearing a basket in which to receive petitions to be brought back to the heavenly throne and the other a basket for thanksgivings for blessings received. The legend runs that the Angel of Petitions comes nightly to the Heavenly Land with a basket loaded with petitions for Heaven's blessings, but the Angel of Thanksgiving often returns with a basket almost empty, for people are far more ready to ask for new favors than to thank God for those already vouchsafed and so all through life that idea runs. We are prone to criticise and to see the unkind or harsh things, merely, perhaps, from force of habit, but are apt to forget to see the kind act or the kindly deed.

IS DEALING IN COTTON FUTURES GAMBLING OR ETHICAL FROM THE STANDPOINT OF CHRISTIAN ACTIVITIES?

REV. LEWIE HARRISON MILLER, pastor of Blackville Baptist Church, Blackville, S. C., asks the MANUFACTURERS RECORD if we will publish and invite a discussion of the question of cotton futures on the following points:

1. Apart from conditions of the law in the matter, viewed solely from the standpoint of ethics, do you consider the buying of cotton futures on the exchange purely for speculative purposes, to be legitimate?

2. Without regard to your personal opinion, how do you think the public generally regards the matter?

3. Whether or not you believe it would be inherently wrong in the light of public opinion as you understand it, do you feel that a member active in the affairs of his church would be justified in engaging in it?

We are glad to permit Mr. Miller to invite through the MANUFACTURERS RECORD a discussion of these points. Some people would view the situation from one angle, and some from another; but the questions which he presents are of sufficient importance to justify a careful expression of opinion by those who feel that dealing in cotton futures is ethically right, or by those who hold to the opposite view. The MANUFACTURERS RECORD will be glad to have such a discussion through its columns.

SOME REMARKABLE FEATURES OF THE DEVELOPMENT AT KINGSPORT, TENN.

IT would be difficult to over-estimate the importance of the tremendous book manufacturing industry at Kingsport, Tenn., the story of which is told in this issue of the MANUFACTURERS RECORD. It is of deeper significance to the South in some respects than the inauguration of any industry in this section for many years.

Here is a plant which will turn out 100,000 books daily, with an ultimate capacity of 250,000 copies a day. A pulp and paper mill immediately adjoins the plant, which has a special department also for manufacturing shipping cases, all of these being made from native woods. A unique feature of the plant is its complete book-cloth-making department. The buildings themselves, occupy 160,000 square feet or about three and one half acres of space. For the operation of the pulp plant something like 40,000 cords of wood are used each year.

Probably the most significant feature of the industrial development of Kingsport is the character of the workmen employed. They are the native white stock from the Southern Appalachian mountains, and through the industries established they are having opened to them unparalleled opportunities of improvement and advancement. Every one employed in Kingsport is given life, health, and accident insurance and doctors and nurses are constantly at work watching health conditions and through clinics and personal visits to the homes are teaching the value of sanitation and disease prevention, diet and other matters that make for health and better living. Kingsport's industries, therefore, are not just making various products, they are building character into the workers and through a thorough, up-to-date educational system are preparing the growing generation to take a more active part in the future of the community. The health, the comfort and the highest all around development of the workmen and their children are major considerations.

The development of the entire community along with the industries of Kingsport offers a striking illustration of what may be accomplished in many parts of the South, where, in addition to the wealth of raw materials and other favorable natural considerations, the community is blessed with a potential working force of the very highest type. Native, white mountaineers, once trained to perform their necessary tasks, are among the most skilled and the most faithful, as well as the most intelligent class of employees in the country today.

We believe that our readers in the South and throughout the country will find much of inspiration and profit in this broad presentation of the remarkable industries which are being developed at Kingsport, and in the underlying spirit which makes this growing city a model in its recognition of the permanent value of building its future upon these native mountain folk, than whom no better stock exists in America.

Given opportunity these mountain people will take an important place in the activities of our country and will prove large factors in bringing into actual development and utilization the extensive resources with which the Southern Appalachian region has been so lavishly endowed by an all wise Providence.

GERMANY'S ENORMOUS POTATO CROPS.

GERMANY'S production of potatoes is always one of the great safeguards of that nation for foodstuff, its output running several times ahead of the potato crop of the United States. In 1922 Germany's potato crop amounted to 1,484,181,000 bushels, which is 533,000,000 bushels more than in 1921 although it is somewhat less than the output in 1913.

The production of sugar beets in Germany in 1922 was

11,869,000 short tons, an increase of 3,100,000 short tons over 1921. Hay crops were also larger than the preceding year.

Thus while the wheat crop of Germany last year was a little less than the previous year, this is far more than made up by the enormous increase in the production of potatoes.

It is a rather striking fact that the increase in Germany's potato production last year largely exceeds the total production in the United States. Our output of potatoes, white and sweet, in 1922 was 560,719,000 bushels, as compared with 1,484,181,000 bushels as the output of Germany.

SOME STRIKING EXAMPLES OF CITY GROWTH UNDER THE OPEN SHOP PRINCIPLE.

FEW cities in America have been growing with more amazing rapidity than Miami, Fla., and the Greater Miami Employers Association gives as one reason for the remarkable building activity in that community during the last three years the adoption of the Open Shop.

There was a long struggle in Miami, and the union labor people dominated the situation there for a time, until the business people and the employers of labor determined that Miami should be an Open Shop city.

Under a statement issued by Mr. Robert A. Cook, the manager of the Greater Miami Employers Association under date of January 9, the following among many other facts are presented:

DO YOU KNOW

THAT in the three years of Open Shop in Miami, building has increased more than one hundred and sixty per cent over the previous three years under Closed Shop?

THAT under Open Shop no work has been tied up on account of strikes and walkouts?

THAT due to this fact and that employers, under Open Shop, can depend upon reasonable production and co-operation from employees, the building industry has been thus stimulated?

THAT during the year 1922 over 2000 men and women were placed at work by the Employment Bureau of your Association, and that over 100 were given work the first week of 1923—this service being free to employer and applicant?

THAT a city must either go forward or backward and to prosper industrial freedom must be assured, and industrial freedom means that every man who labors shall have the right to work whether he possesses a union card or not. It means that every employer shall have the right to operate his business without the dictation of some outside agitator who has in view only the feathering of his own nest, who neither invests or produces, who knows nothing of the actual working conditions and who thrives on his ability to create distrust and antagonism among workers toward employers, making for decreased production, inefficiency, un-Americanism, strikes and consequent suffering.

THAT the Open Shop promotes harmony between employer and employee, increases efficiency, maintains an equitable wage scale, stimulates faith, makes it possible for Capital and Labor to work together for their mutual interests and the interests of the public at large, makes better citizens of all, and builds around a city an impregnable wall of confidence, contentment, and co-operation against strikes, violence, un-Americanism and hampered progress that follows as does night the day in the wake of the closed shop.

THAT Herrin, Illinois is 100 per cent Closed Shop?

THAT brute force, incendiarism, and murder instead of peaceful persuasion, are more often the weapons of the advocates of the closed shop?

THAT if OPEN SHOP is good for society, if it is good for a community, it is good for an individual and that YOU, as an individual, if you believe it is right, owe it to yourself and to your community to work constantly to make Miami 100 per cent Open Shop.

This survey of what has been done in Miami, and what the Open Shop means for the promotion of harmony between employer and employee economically, and for better conditions for everybody interested, is a very fair statement of what applies wherever the Open Shop prevails.

The Union Shop is a shop closed to the best spirit of

Americanism. It is a shop closed to the man who does not carry a Union card regardless of how efficient he may be, or how inefficient a man with a Union card may be.

The Open Shop places a premium upon efficiency.

The Union Shop places a premium upon inefficiency and slackerism. It is the Union Shop which has steadily decreased efficiency and causes a man to do less work than honesty and honor demand of him.

A report has recently been issued by the Cleveland, Ohio, Chamber of Commerce giving correspondence between Mr. Samuel Gompers, president of the American Federation of Labor, and Mr. Newton D. Baker, president of the Cleveland Chamber of Commerce. Mr. Baker's reply to some statements made by Mr. Gompers is very illuminating. The Cleveland Chamber of Commerce has carried an advertisement in the local papers in which it declares in favor of "the shop where every worker's chance is as good as every other worker's chance and from which no worker is shut out because he holds a union card and from which no worker is shut out because he has no union card."

Mr. Baker in his statement as to the situation in Cleveland and the relations between employer and employe, says: "out of 759 industrial plants which responded to the questionnaire, only 17 operate closed union shops, while 584 operate open shops, and 132 closed non-union shops. In the open shops there are normally employed 136,488 employes; in the closed shops 15,721 employes." To this statement Mr. Baker adds: "The showing is conclusive. After all these years of struggle, only 17 out of 759 establishments, and only 1736 out of 163,839 employes operate under the closed union shop policy."

"No man," says he, "can assume to speak for the public opinion of a great city, and yet I do not think I can be mistaken when I say to you that if the question of closed union operation versus open shop operation, as a universal characteristic of industry, could be submitted to a popular vote in this city, the Open Shop policy would carry by so overwhelming a vote as to leave a negligible number against it."

"From these two circumstances I think it is fair to say that the closed union shop policy has not succeeded in winning the confidence of industrial workers here in Cleveland, and that it has also failed to secure public approval. The battle for it, therefore, is a threefold battle, waged by a small minority of industrial workers against a majority of industrial workers, against a majority of employers, and also against an overwhelming public sentiment."

Los Angeles is another remarkable example of amazing growth under an Open Shop plan. There the battle for the right of a free man to work without a union card was fought out years ago and won for liberty when by one of the dastardly crimes sometimes committed by union labor organizations, a Los Angeles paper was dynamited, killing and maiming a large number of its employes, purely because it had for years fought for the Open Shop. Some of the men known to be guilty of that atrocious act were vigorously defended by many labor union people, but they were convicted of the crime.

That battle won industrial freedom for Los Angeles, for wherever red, rampant murder lifts its head in this country for the murder of innocent people because they are working in non-union shops, there the fight must go on until liberty reigns supreme. Otherwise, lawlessness would destroy the community. And since Los Angeles won that battle it has made almost miraculous progress.

We believe there is no city in America in which the open shop prevails, fully, fairly, and freely, which has not felt the stimulating power of that influence for the business advancement of the community and the better relation of employers and employes.

AN ENGLISH COTTON RAISING EXPERIMENT WHERE THE COTTON COST 41 CENTS A POUND.

"As to the efforts of England and other Europeans to raise cotton in other parts of the world, I am reminded of the experience of a friend of mine, George Hawkins, one of the best cotton planters in Mississippi, who was engaged by an English syndicate to take charge of a tract of land on the west coast of Africa, which seemed to possess every essential for the successful raising of cotton. Mr. Hawkins spent two years on the job and on his return home told me his experience, which in short was: He was supplied with every means known to cotton culture, no expense was spared to make the venture a success. Labor was plentiful, costing practically nothing, as he expressed it, '5c a day for a husky African.' The finest seeds were used and cultivated like a flower garden and the final result of two years' effort was a short cotton of one-half to five-eighths, dry seed, no oil production, and a cost of 41c per pound. The Englishmen threw up the enterprise in disgust. This happened twelve years ago."—J. R. Williston & Co., in the New York Journal of Commerce.

The experience of Mr. Hawkins is about similar to that of some eight or ten Southern planters who more than eighty years ago were employed by English syndicates to go to India and increase the cotton production of that country. They, too, abandoned the job after years of struggle, and returned to this country.

These experiences will be duplicated many times by the efforts which English cotton growers are making to raise cotton in other parts of the world, and many of those who are now enthusiastically claiming that England will some day become free from dependence upon the South for its cotton will, like the English syndicate to which Mr. Hawkins refers, throw up the job in disgust, finding that they cannot raise cotton except at a price which in the past they have considered exorbitant, but which in the future they may have to pay in order to get a supply to run their mills. When England will agree to pay 40 cents for its cotton, then the South will in some way provide a supply.

THE RIGHT KIND OF MAN.

MR. J. R. HOLMGREEN, of the Alamo Iron Works, San Antonio, Texas, in writing for five copies of a folder recently issued by us entitled "The South, the Coming El Dorado of American Development," says:

"I am just a greasy mechanic with little influence, employed by the Alamo Iron Works, but your concise little pamphlet appealed to me, and I am sending a copy to friends in Wisconsin, Michigan and Indiana where years ago I used to work. I too am a lover of the South and of true Americanism."

It matters not whether Mr. Holmgreen wears the garb of the mechanic, the garb of a business man, or the cap and gown of a university man, he is the kind of man that the MANUFACTURERS RECORD loves to hear from. We love to know of the men and women who having come from other sections have become lovers of the South and are true Americans in spirit and in deed. These are the people who can mightily influence the whole nation, for they can send back to their friends in other sections their enthusiastic commendation of the South, and thus help to bring all sections into closer and more harmonious relations. May we have many such Americans coming year by year from other sections into the South. Of these people we cannot have too many, but we do not want the un-Americans who come with their alien language, and alien thought, alien morals, and alien effort to break down our laws and to break down the observance of the Sabbath day.

The men and women who settled this country in the early days were God-fearing people. Those who have been crowding to our shores for some years have to a large extent been God-hating people. The difference is as wide as the distance between Heaven and the lower world.

AN INSPIRING WORK OF CO-OPERATION BETWEEN TOWN AND COUNTY IN GEORGIA FOR PROGRESS AND PROSPERITY.

VERY rarely have we published a more striking story of what can be accomplished by a spirit of thorough, hearty co-operation between the business men of a community and the farmers of the surrounding territory, than the one we are publishing today as to how Carroll county, Georgia, is meeting the situation developed by the boll weevil pest.

Writing on this subject to the MANUFACTURERS RECORD, Mr. I. S. Ingram, Principal of the Fourth District A. & M. School of Carrollton, gives the following remarkably interesting résumé of what the people of that town, in co-operation with the farmers of Carroll county, are doing:

"Many things have been said about the co-operative spirit of California and other Western states, but few know that at Carrollton, Carroll county, Georgia, there is a spirit of co-operation that even surpasses anything so far experienced by the many co-operative agencies.

"Carroll county has often been called the Free State of Carroll. Various reasons could be given for this, but the one often given is that there are so many small well-to-do farmers in the county, and since they have prospered reasonably well, there grew in them a spirit of individualism and independence which has characterized them as no other people. Consequently, the action of the individual soon showed itself in the behavior of the whole.

"Now you would hardly think that such a seed-bed of individualism would be a logical place for successful co-operation, but this is what happened:

"In the spring of 1922, a few men of the town realized that something had to be done if Carroll county continued to raise cotton. Consequently, they called together other business and professional men to discuss some plan for concerted action. This group decided since the county was fundamentally agricultural: that local business depended on the success of the agricultural interests; that the business man as well as the farmer shared the responsibility of success or failure of farm crops; that they as business men would assume their part of this responsibility. And they did.

"Their first act was to educate the business man himself. All agreed that King Cotton was the vital subject. Therefore, experts were brought in to lecture to these men about seed selection, fertilization, cultivation and growth of cotton. They learned from these experts that the use of calcium arsenate was the best known method of fighting the boll weevil. But the use of it was practically unknown in the county. They knew that many of their farmer friends were 'from Missouri' and that it would be hard to get the farmers to go to this extra expense, even should a supply of the arsenate be available. However, by this time they were undaunted in their purpose and agreed to make unprecedented effort.

"They decided to buy the arsenate. A fund of \$4600 was subscribed and paid in. This was to be a revolving fund to be used not only for the purchase of arsenate, but for the guns to put it on.

"This group of men realized that their work had just begun. The arsenate not only had to be bought, but had to be properly distributed. Since the farmer was skeptical and since he knew nothing of its use, he had to be made interested, and he had to be shown how to use the arsenate.

"This task was not a one-man job. An enterprising firm of the town, Mandeville Mills, agreed to give the time of one of their active and highly efficient men to take charge of the organization, which the business men had formed, and to make it function.

"This man immediately put every man to work. He simply would not accept any excuse from anybody. He called into service, bank presidents, lawyers, ministers, doctors, merchants and a host of others. He sent strong committees to purchase the arsenate and the guns; he got all of the warehouse men to handle the arsenate and the guns at actual cost; he obtained the promises of all of the business men to close their establishments at 4 o'clock in the afternoon and to go out to prearranged meetings with the local speakers, who told their farmer friends in the various rural sections of the use and the value of the arsenate in cotton cultivation.

"Often thirty or forty business men attended these meetings. The farmer was told of their spirit of co-operation,

of the motive that actuated their coming and of the realization of a dual interest that he (the business man) was appreciating more and more. After these talks, demonstrations were given in nearby fields to show just how to apply the arsenate. Such enthusiasm and faith moves mountains. The result was that calls came in immediately for arsenate and guns. This educational work was continued for three weeks. One hundred and fifty thousand pounds of arsenate was bought. Of the \$4600 loaned by the business men for the revolving fund, not one man lost his money. It was all returned to each subscriber.

"The result of this activity is seen in the ginners report. The county made more cotton than the combined total of its neighbors.

"But that was not the real value of this initial experience. A lesson had been taught. The business man and the farmer realized that co-operation was not a hard task. They have been taught, too, that each has a viewpoint; that the association in a common cause had been of untold mutual benefit; that since this experience had been successful they could with their combined strength do greater things.

"Hence it was not surprising then to see a stronger organization perfected to work for the mutual interest in 1923. Already a fund of \$16,000 has been subscribed and paid in advance. Pure-bred cotton seed has been purchased and a campaign is being waged in the interest of seed.

"All of the business men are being called upon to aid in this publicity. In the meantime the purchase and the importance of the use of calcium arsenate are not neglected. Not only are plans made but they are constantly being developed by successful campaigns. The organization feels that this is the secret of all former success and hence they are not neglecting this feature now.

"The above plan is no experiment. It has worked successfully. But one may ask, 'Were there other agencies somewhat responsible? Yes, while many other towns larger than Carrollton left off their board of trade, Ad club activities, county agent, home demonstration agent and other welfare bureaus, all of these agencies were continued in Carroll. In addition to the above helpful agencies there is a strong farm bureau and Cotton Growers Association. All of these contributed to the success of the co-operative movement.

"One feature of the Ad club is to sell for the farmer any commodity which he wishes to place on sale. This feature has grown to such proportions that it takes almost an entire day to dispose of the various sales. The farmer gets the entire amount of the sale. No cost is charged to him.

"If there are those who think that the above story is exaggerated they should visit the town and county. Some have investigated. They came, they saw, they were conquered.

"The editorial in The Atlanta Journal of January 7, 1923, 'The Floyd County Plan,' resulted from the investigated action of Carroll county.

"The Clearing House Association sent for Carroll county representatives to tell them of this scheme. The representatives were sent and hence the action on the part of the business men of Rome. Not only Rome but others have adopted this plan. Will it work? It has in Carroll."

Here is a spirit which fairly radiates the teachings of the Golden Rule. It is a spirit which stirs one's blood as we think of what might be accomplished for the betterment of humanity if in every town and every county in the entire country this spirit of friendly, hearty, whole-souled co-operation could be put into effect.

Mr. W. G. Brown, Secretary of the Carroll County Trade Board, writing the MANUFACTURERS RECORD on the subject, says:

"This plan has attracted attention of our neighbors, who are now putting it into operation in other counties. I am enclosing you one of our Golden Rule Sales Day circulars. We operate this under the Advertising Club of Carrollton. We have a mailing list in our trade territory of some 10,000 farmers who get this circular every month. You will notice we are featuring in this circular pure-bred cotton seed. These sales are very successful and draw trade from a radius of 40 miles. We are rather proud of Carroll county and will try to lead the State in cotton production, as well as in diversified farming. Carroll was the third county in Georgia in 1922 in cotton production. If we continue the good work we will lead the State in 1923."

The circular to which Mr. Brown refers is a large four page sheet announcing "Carrollton's Sixteenth Golden Rule

Sale." One of its paragraphs announces that this is a farmers' auction, and that the auctioneer charges nothing for his services, and adds:

"We confidently expect this to be the largest sale yet held. Bring your live stock, second-hand farm implements, second-hand household and kitchen furniture; in fact, any surplus item you have. These sales are for farmers only. There is a probability that some one attending this sale will need just the item you wish to dispose of; and perhaps the very thing you need will be sold. It pays to attend these auction sales."

And then follows the names of the committee in charge of the auction; and the circulars carry endorsements from the Agriculturist of the Central of Georgia Railway, a cotton expert of the State College of Agriculture, a cotton expert of the Experiment Station, and others who have endorsed this plan and have pledged their support to the movement in the furtherance of developing in that county the use of pure-bred cotton seed; and all of this is handled by the Ad Club of Carrollton.

The circular also carries a large number of advertisements from the business men of Carrollton in order to let the farmers know what they have for sale and the prices at which their goods are sold. Over about half of these advertisements is the line "Beat the boll weevil by using pure-bred cotton seed." and over the other half "Use pure-bred cotton seed."

The story of what Carrollton and Carroll county are doing as told in the two letters which we are publishing, and the facts quoted from the circular give promise of stirring a nation-wide interest in a closer affiliation of the business men of every energetic community, and of the farmers of the adjacent territory. Limitless good awaits the development of this plan. If put into full operation in every part of the country it would bring about harmonious relations not only between the business men and the farmers, but also a closer spirit of friendship and co-operation between the business men themselves and between the farmers themselves. It would stimulate the ambition and the energy of all classes in the town and in the country. It would create a spirit of brotherhood, of humanity; and would increase the prosperity of the town and the county to an extent which cannot well be measured.

Let the example of Carrollton and Carroll county, therefore, quicken the thought and the action of every other town and county in the entire country—north, south, east and west.

A PROTEST AGAINST A PROPOSED INCREASE IN FREIGHT RATES ON MANUFACTURED IRON PRODUCTS.

Thomas Grate Bar Company,
Birmingham, Ala., February 1.

Mr. Ed. L. Thomas, President,
Thomas Grate Bar Company,
City.

Dear Mr. Thomas:

In connection with your recent inquiry regarding the proposed cancellation by carriers of all less than carload commodity rates between points in Southern territory, that is, south of the Ohio River and east of the Mississippi River:

It would be impracticable at this time for any one with any degree of accuracy to state just what these increases will average or the effect the cancellation of these less than carload commodity rates will have on the movement of traffic throughout the Southern States in general—practically all shippers, however, would be affected more or less, none of them as much probably as shippers of iron and steel or manufactured iron products, including ourselves.

The Interstate Commerce Commission in ICC docket No. 13494 instituted on its own motion a general investigation of Southeastern class rates, and during the investigation a request was made on both the shippers and carriers to offer testimony for the purpose of showing to what extent the less than carload commodity rates can be cancelled, provided a

uniform and reasonable class rate structure is prescribed. This investigation is still pending.

It has been stated that our present irregular class rate structure with its numerous class percentage relationship has to a certain extent been the cause for the establishment of quite a number of less than carload commodity rates in that the class rates were too high to permit a free movement of the traffic.

If the classes as now proposed by the carriers in this investigation are made effective, it is the general opinion of the shipping interests that it will be necessary that a greater portion or practically all of our less than carload commodity rates be retained, if the carriers are not to be granted an enormous increase in their aggregate revenues by the Commission as a result of this class rate investigation—which the Commission states is not involved or contemplated.

Should our present commodity rates less than carload on "Manufactured Iron Articles" under which our product—Grate Bars and Castings—moves, be cancelled and we should be forced to apply instead the class rate scale as has been proposed by the carriers, our rates would be practically prohibitive to many sections to which we can and do reach.

These increases, for instance, would be:

TO:	Per Cent
St. Louis, Mo.	229
Memphis, Tenn.	235
Vicksburg, Miss.	218
New Orleans, La.	244
Mobile, Ala.	207
Jacksonville, Fla.	245
Savannah, Ga.	245
Richmond, Va.	220
Cairo, Ill.	215
Cincinnati, O.	245
Nashville, Tenn.	273

and many other points in proportion.

For instance, interior points in Florida that base on Jacksonville.

All destinations in Arkansas—many points in Missouri and Kansas basing on Memphis.

Destinations in Virginia basing on Richmond.

All destinations North and West of Cairo and Cincinnati, which base on one of those points.

It is my information that the carriers will probably postpone action on this proposal to cancel out the less than carload commodity rates until the investigation of class rates in Southern territory has been concluded, at least it is to be hoped they will, for we hardly see how the carriers can from a policy standpoint assume any other position, because the shippers cannot determine at this time what less than carload commodity rates can be cancelled until they know what class rates are going to be. Nor does it stand to reason that the Commission would, with any degree of fairness, permit such advances as those cited above at this or any other time merely for the sake of uniformity.

W. D. WEBSTER,
Traffic Department.

The foregoing letter from Mr. Webster of the traffic department to the head of the Thomas Grate Bar Co., of Birmingham, shows what the increase would be in less than car lots on the products of that firm and many others. Some manufacturers who ship only in car lots might not be seriously affected, but many others would suffer severely if this increase were put into effect.

In sending this letter to the MANUFACTURERS RECORD, Mr. Thomas writes:

"I am handing this to you to be used just as you want, or relegated to the scrap pile if you have finished on this subject—but it is of such vital importance to the South that I do not see how it could be finished until the question is settled. If the change is made, we will all be so impoverished until we will not have the wherewith or inclination to try to get it changed back.

"We want to thank you heartily for the efficient work that you are doing in behalf of the people not only to cure the troubles that are existing today in our transportation system, but are also working to prevent others from taking place that will be as bad or worse than those we already have. For, unfortunately the compounding of troubles does not produce desired conditions."

One trouble is that so many good executives prefer to be poor golfers.

Book Production on Enormous Scale by Huge Printing Plant at Kingsport, Tenn.

WORKS OF WELL-KNOWN AUTHORS TO BE REPRODUCED AT RATE OF 250,000 DAILY FROM TREE TO FINISHED BOOK—NEW MILLION DOLLAR PAPER MILL ADJOINING TO FURNISH ALL BOOK PAPER FROM SOUTHERN WOODS—COORDINATED INDUSTRIES, QUANTITY PRODUCTION AND UNUSUALLY COMPLETE ECONOMIC MANUFACTURING, LABOR AND SHIPPING ADVANTAGES MAKE POSSIBLE ESTABLISHMENT OF COUNTRY'S MOST UNIQUE BOOK PRINTERY IN THE SOUTH—KINGSPORT'S EDUCATIONAL SYSTEM AND COMMUNITY SPIRIT OUTSTANDING FACTORS IN CONTRIBUTING TO CITY'S DEVELOPMENT.

By WM. H. STONE.

From the tree to the finished book and turned out at the rate of 250,000 copies a day is what will be accomplished by a huge book printing plant, covering three and one-half acres of floor space, that has just started operations at Kingsport, Tenn. The printing plant is located immediately adjoining a large pulp and paper mill, which makes book paper from Southern woods. And, as the cloth for the covers is also made in the South, the books turned out will be completely a Southern product.

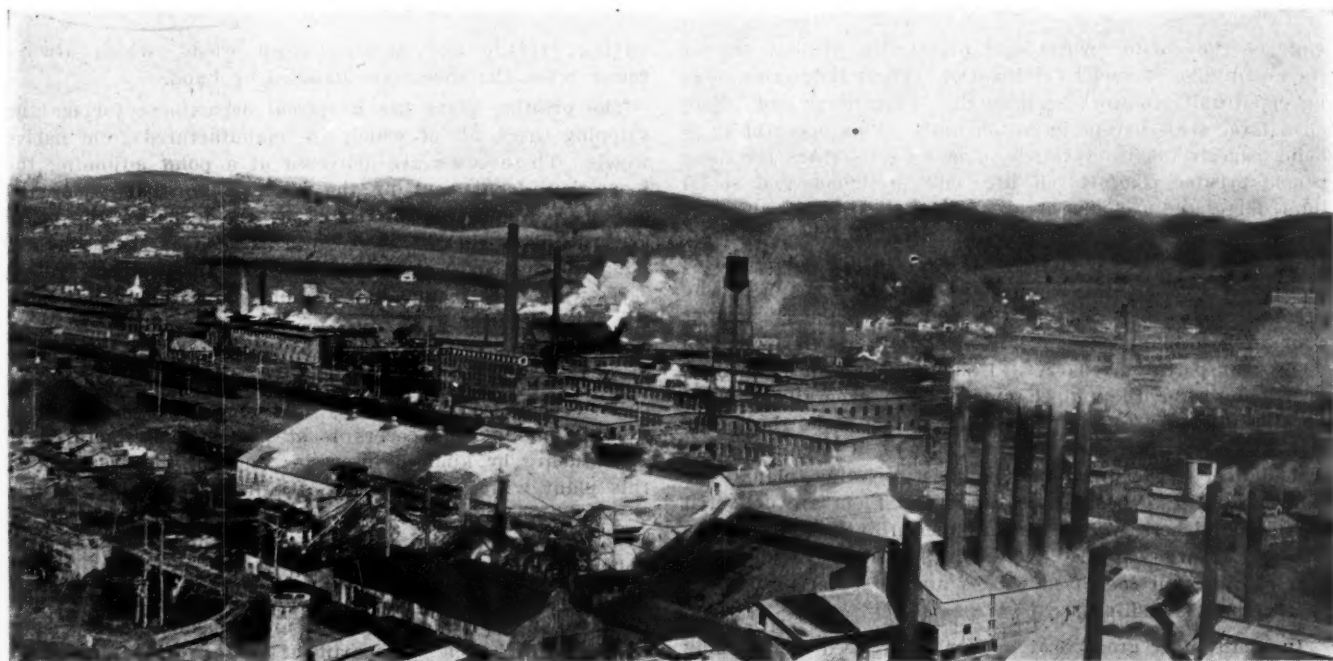
This new enterprise is known as the Kingsport Press, and was organized by the same interests which control the printing establishment of J. J. Little & Ives, of New York City, who have been printers for the publishing trade for many years. Consequently this undertaking is being developed by men of wide experience, and preceding the selection of equipment for the new plant, Mr. L. M. Adams, the president of the company, made an extensive trip of investigation, both in this country and in Europe, in order to ascertain the very latest methods in quantity book publication. This resulted in the plant being equipped with the last word in machinery and devices that will provide for efficient and rapid work.

It is an interesting fact that the first order booked by the Kingsport Press is for 155,000 copies of the New Testament. Arrangements have also been made to print for F. W. Woolworth & Co. big editions of the works of well-known authors.

These books will be each 256 pages, and will be cloth bound. They will be sold in the Woolworth five and ten cent stores all over the country, at the price of ten cents each. The series of books to be printed will include such authors as Robert Louis Stevenson, Rudyard Kipling, James Fenimore Cooper, A. Conan Doyle and many others. The ten cent books will not have a cheap appearance, but will be printed on standard high grade book paper such as is used in the average books of the day, and they will have cloth bound, gold embossed covers, making altogether a truly amazing volume to be sold at such a low price, that is only made possible because of the peculiar and complete economic manufacturing advantages the Kingsport location provides.

The pulp and paper mill immediately adjoins the printing plant. This mill is owned and operated by the Mead Fibre Company, of Dayton, Ohio, and the paper making department, which is being installed at a cost of over \$1,000,000, will have an ultimate capacity of seventy tons of finished paper per day. The pulp from which this paper is manufactured is made from logs that come from the South and spent chips from the adjoining tannic acid plant of the Grant Leather Corporation.

When the paper is finished, it is cut to the size required by the printing plant and goes direct from the paper machines to the presses on movable platforms, thus eliminating all need of packing the paper in cases and all freight charges



Tannery

Tannic Acid Plant

Pulp Mill

Paper Mill

Printing Plant.

A PORTION OF KINGSPORT'S INDUSTRIAL SECTION SHOWING PROXIMITY OF COORDINATED INDUSTRIES. CLINCHFIELD PORTLAND CEMENT PLANT IN FOREGROUND.

that printing establishments in the cities have to pay to get their paper.

The material for the book-cloth-making department of the printing plant is at present being made by a cotton mill in Spartanburg, S. C.

Thus is being carried out one of the fundamental aims of the founders of Kingsport, which is to create, as far as possible, a cycle of industries that will permit the complete product going out in a finished form, and not be the raw material for some other industry in some other place. The building of these co-ordinated plants is a remarkable undertaking, and as far as the printing plant is concerned it is really a revolutionary step in the printing industry of this country.

This was a bold move, but those behind these great enterprises did not decide to invest the several millions of dollars necessary to establish such large plants until the most exhaustive investigations had been made. Moreover, they are men of years of knowledge and experience in the book printing and paper making business, which makes their selection of Kingsport a truly remarkable tribute to the advantages offered by this Southern Appalachian section. And what wonderfully stimulating industries they are going to be to these mountain people—a people who for generation after generation, from the settlement here of their forefathers, have lived practically in the same way, without much knowl-

as it goes from the printer to the bookbinder it must be cased again. A third casing is necessary when it leaves the bookbinder to go to the jobber, who in turn has to re-case all the books to ship them out in smaller quantities to the retail stores. All these many steps in handling and casing paper, or the finished books, involve wastes that in the end must be charged to the cost of putting the books on the market.

As the paper comes from the machine it is cut to size, counted and piled on a platform which is especially built for ready handling by industrial factory trucks. It is quickly delivered to the printing plant and located directly back of the presses, where sheet by sheet it is picked up by automatic fingers and fed to the presses—all without human hands touching it. The presses will run continuously, three eight-hour shifts being provided. After the sheets go through the presses they are delivered to another platform, which places them immediately back of the folding machines, into which the paper is fed automatically. After being folded the sheets are cut, and this is the first time the paper has been touched by human hands since it came into the plant. They are then passed to the gathering and stitching machines, and on to the book covering department, which completes the book. Wherever possible, the product is transported by machinery on automatic carriers, both for the purpose of



GENERAL VIEW SHOWING PART OF PLANT OF KINGSPORT PRESS.

edge of the outside world and practically without any of the advantages of modern civilization! These industries mean an opportunity to work such as they have never had before on a large scale except in cotton mills. This opportunity is being eagerly taken advantage of because it means for these people greater comforts in life, more religious and social intercourse, and a chance to secure an education for the children.

It is a very radical step for a big printing plant of this kind to be located away from large publishing centers. The greatest inducement was that it put the plant right next door to a pulp and paper mill, which in itself overcomes many transportation charges. Under the present method of operation, after the pulp is made it is generally shipped varying distances to the paper mills, which make the paper. The finished paper is shipped to jobbers, who in turn sell and deliver it to printers. In most printing plants the books are sent to bookbinders and from them are delivered to book publishers, who in turn send them to the retail stores. Not only is large expense involved in packing and transportation charges, but increased wastes and losses occur because of the many handlings.

In addition, a great deal of lumber is used for packing and shipping the paper. When the paper goes from the mill to the printer heavy wooden cases have to be provided and

saving expense and keeping down waste, which always comes when the sheets are handled by hand.

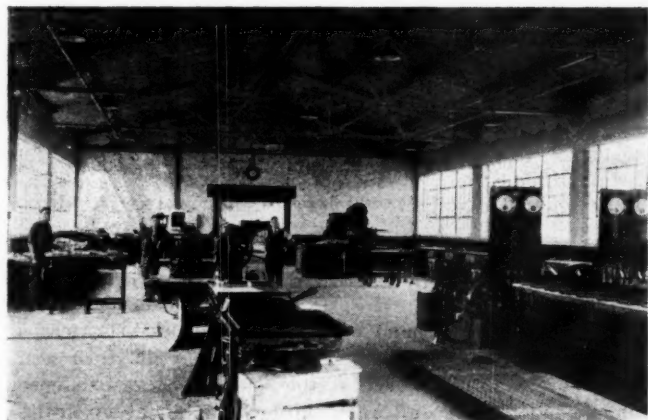
The printing plant has a special department for making shipping cases, all of which are manufactured from native woods. These cases are delivered at a point adjoining the inspection department of the bindery, so that when the books are completed and passed by the inspector the boxes are waiting to receive them. And as soon as the books are put into the boxes they are placed in the waiting freight cars, which are located on a siding immediately adjoining the shipping room.

Various other economies make it possible for this printing plant to furnish a service to publishers that will reduce the cost of books very materially. As stated above, the cloth used in making the covers is at present manufactured in Spartanburg by kindred interests; and the requirements of this plant will keep this cotton mill busy making nothing else but this cover cloth. In one of the departments of the book printing establishment this cloth, which comes in grey unbleached form, is converted into book cloth.

To have a complete book-cloth-making department is something unique in printing plants, and considerable saving is made because such a department was provided, as many steps in shipping and reshipping, packing and unpacking are eliminated. And not only is money saved that would

otherwise go for the expense of these things, but there is likewise a great saving in the volume of wasted or spoiled materials.

This plant will have nothing to do with the marketing of the books it prints, as it has been emphasized by the officials that theirs is not a publishing house but a printing plant catering especially to publishers. The ten cent books which will be made here are only possible through the utilization of modern equipment and economies in assembling and distributing the finished products. In addition to these standard works, this plant will also specialize in printing large editions of bibles, dictionaries, school books, and long runs of similar



ELECTROTYPING DEPARTMENT, KINGSPORT PRESS, CAPACITY 2000 BOOK PLATES DAILY.

publications. The present capacity of the plant, on a force production basis, is 100,000 books per day of twenty-four hours. This output will later be increased to the full capacity of 250,000 books daily.

The buildings comprising the plant occupy 160,000 square feet, or approximately three and one-half acres. The plant is all located on one floor, with the exception of the linotype department and the electrotyping plant that makes the book plates. A comprehensive idea of the immense size of this plant is shown by the dimensions of the various departments given in the list below:

Offices, 44 x 100 feet.

Composing room, 44 x 118 feet, which is sufficient to accommodate 25 linotype machines.

Electrotyping foundry, 44 x 98 feet, with equipment to turn out 2000 book plates daily.

One press room, 78 x 200 feet, with accommodations for 16 perfecting presses.

Second press room, 78 x 200 feet to accommodate 20 presses.

Paper stock and work room for product of presses, 78 x 100 feet.

Bindery folding department, 44 x 200 feet.

Gathering and sewing department, 78 x 200 feet.

Cover making, stamping and finishing department, 78 x 100 feet.

Examination and packing department, 78 x 100 feet.

Stock and shipping room, 78 x 80 feet.

Book-cloth-making department, 60 x 200 feet, with capacity for 25,000 yards daily.

The company's faith in the ultimate success of this printing plant is indicated by the fact that it has purchased six acres adjoining the building to provide for future extensions.

Pulp and Paper Plant of Mead Fibre Company.

As previously stated, one of the compelling reasons why the big printing plant was located at Kingsport was its ability to obtain its book paper from an adjoining plant. This plant is operated by the Mead Fibre Company, which was organized March 1, 1920, taking over the assets of the Kingsport Pulp Corporation. During the last three years large additions have been built to various departments,

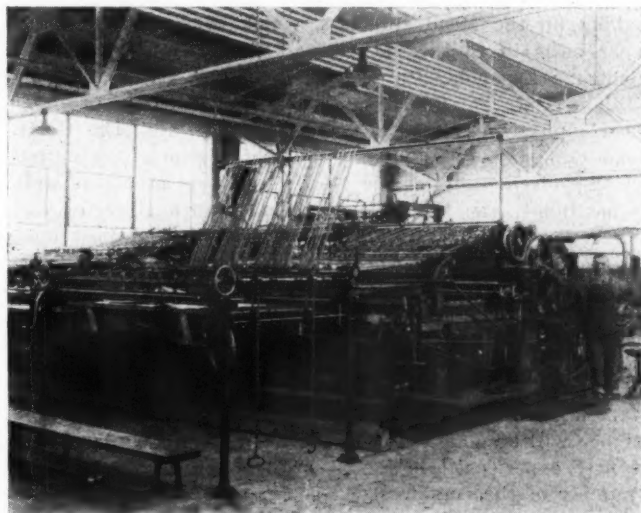
including the boiler house, recovery plant, and caustic plant. A new machine shop, supply stores and material storage buildings have been erected. An electrolytic bleach plant has also been constructed and will be put into operation sometime during the coming summer.

The largest single development has been the building of a paper mill, which is now nearing completion. The paper mill will have for the present a capacity of thirty-five tons of paper per day, but the mill is so constructed that a second machine, doubling the capacity, can be added with very little difficulty. The paper mill was designed by the Management Engineering & Development Company, of Dayton, Ohio, one of the Mead Group, and will be one of the finest and most modern of its kind in the country.

There are four buildings included in the new paper plant installation, including a turbine and engine room, 42 x 84 feet; beater room, 56 x 75 feet; machine room, 75 x 209 feet, and a finishing room, 72 x 140 feet. With the exception of the turbine and engine room, which is one story in height, all the other buildings are two stories. They are of strong, permanent construction, being built of concrete, steel and brick, and are equipped with a Sturtevant heating system.

At present the Mead Fibre Company is buying its bleaching compounds from outside, but a new building 85 x 150 feet is being completed and will be equipped to turn out approximately 20,000 pounds of bleach powder and 10,000 pounds of caustic soda daily, which will supply ample chemicals to take care of the bleaching requirements of this mill. Several minor structures are also being erected, including a heavy material storehouse 32 x 150 feet and a lime mixing room 20 x 40 feet.

A very interesting condition exists with regard to the pulp mill in the securing of its supplies and the disposal of its product. Lime can be secured in Kingsport; the company will make its own bleach, which is another one of its more important raw materials; soda ash is available within sixty miles, as is also coal; a considerable portion of its wood supply



PERFECTING PRESSES BEING ASSEMBLED AT KINGSPORT PRESS.

is secured from the Grand Leather Corporation, an adjacent plant; in the form of spent chestnut chips from which the extract has been removed, and the Tennessee Eastman Corporation also supplies some of the wood used, after it passes through its large wood distillates plants at Kingsport.

Altogether, for the operation of the pulp plant approximately 40,000 cords of wood are used annually, all of which comes from the South and includes such trees as poplar, black and red gum, cotton-wood, bass-wood, birch, chestnut, beech, willow, soft maple and pine. A highly interesting phase of forest conservation is contained in the fact that



PULP AND PAPER MILL AND CHEMICAL PLANT OF MEAD FIBRE COMPANY.

the quantity of spent chips taken from the tannic acid plant approximately equals the amount of wood that would be furnished by 3000 trees monthly, thus enabling a saving of 36,000 trees annually. Were it not for the location of this pulp plant at Kingsport, the only use to which these spent chips could be put would be to burn them in the boilers.

Eventually, the Kingsport Press will consume a large part of the product of the paper mill, and these arrangements make the Mead Fibre Company stand out as a distinctive plant, as it is doubtful if any other institution has the same possibilities with regard to its raw materials and product as exist in this particular instance.

The Mead Fibre Company is one of a group of mills making up the Mead Interests, which consist of pulp and paper mills in Chillicothe, Ohio; Dayton, Ohio; Escanaba, Michigan; Espanola, Sturgeon Bay, Spanish River and Fort William, Ontario. Their sales are in the hands of other Mead interests—The Mead Sales Company and The G. H. Mead Company, of Dayton, Ohio, which handle the output not only of the mills of the Mead Group but others as well. As mentioned, the Mead Group includes an engineering and construction company which makes it a self-contained unit, able to finance, build, construct and operate, and sell the products of pulp and paper mills.

Mountain Labor Readily Adaptable to Industrial Employment.

The present equipment of the big printing plant will necessitate a force of between 800 and 900 employes, and this number will be doubled when the plant is entirely equipped. At first experienced help will have to be brought in, but a number of the employes will come from the nearby mountain regions and eventually as they become trained it is expected that practically all the workers in some of the departments will be mountain people.

Thus is opportunity continuing to open up for the sturdy inhabitants of this Southern Appalachian region an ever-broadening chance to become active workers in our industrial life. This has been one of the results of the continued development of this mountain section. Too long have these inhabitants been without any means of remunerative employment, and for generations they have been eking out a bare existence in endeavoring to wring a living from steep hillside farms of ten, fifteen and twenty acres where no farming implements or farm animals can be used, but the

soil must be tilled by hand with hoe or mattock. The crops raised are necessarily meagre, being largely of corn and hardly more than ten bushels to the acre. Such an existence could do naught but dull all ambition and kill every initiative, because throughout the region there was no incentive or opportunity for other work.

Given an opportunity for employment in the industries that have steadily come into the Southern Appalachian country, to develop its remarkable resources of minerals and timber, these mountain folks have shown themselves splendid workmen; quick to adapt themselves; readily catching on to the requirements of the work assigned them; reliable in attending to their duties, and self-reliant, loyal, faithful employes. It has been remarkable to hear the expressions of commendation coming from the officials in charge of the plants concerning their views of the value of the mountain people as workers, in comparison with those in other parts of the country. The managers of every plant have been enthusiastic in their praise of the sterling qualities of this labor, its alertness to learn and its devotion to the work.

A splendid evidence of this is the way they have stuck to their jobs, as shown by the experience of the pulp plant of the Mead Fibre Company. This plant employs approximately 350 men. Of these 8 per cent have been with the company for six years; 19 per cent five years or longer; 38 per cent four years or longer; 69 per cent three years or longer, and 93 per cent two years or longer.

A remarkably interesting fact about these employes is that, with the exception of the vice-president, superintendent and chemist, all the other employes of the Mead Fibre Company are natives of this section, and Vice-President Thickens, in commenting upon his labor, made the statement that he considered this mountain labor to have the finest fundamentals of any labor supply he had encountered in either this country or Canada, where he has been active in other paper mill operations. In starting the new paper mill, Mr. Thickens stated, of course it would be necessary to bring some experienced paper making employes from some of their other plants, but that as soon as these experienced men had taught the native labor how to operate these plants they would be gradually returned and the paper mill would be eventually run entirely by the employes from this section.

All of the employes of this institution are furnished with

health, life and accident insurance by the company. It was as a result of the proposed installation of these kinds of insurance by the Mead Fibre Company that the idea spread to the other industries and made Kingsport the first community in which all of the employers of labor provided their men with these types of insurance on a community basis.

As a result of the company's intimate relations with the Kingsport Press, an arrangement has been made whereby books published by the Kingsport Press will become available without cost to the employes of the Mead Fibre Company and to those from whom it secures its wood supply. It will thus be possible for these men to have the advantage of good books without expense, and they will represent something much more personal than a book ordinarily does, due to the fact that the materials contained in them will be of their own manufacture and production.

The managers of the other industrial plants in Kingsport, including the Kingsport Brick Corporation, the Clinchfield Portland Cement Corporation, the Grant Leather Corporation, and the Tennessee Eastman Corporation, report similar experiences in developing this mountain labor—all of which bear out the fact that when given the opportunity they have every willingness to work, and the splendid fundamentals of character and self-reliance that have been handed down to them from generation to generation make them unusually fine types of workers.

Kingsport's Educational System.

In determining to establish an industrial community at Kingsport, those behind this development had in mind bringing just such opportunities to the mountain folks as much as they did the utilization of the resources of this region. It was soon realized that the future of Kingsport must be built around these people, and very wisely, in order to provide for the future, an educational system has been established that is making splendid men and women out of the mountain boys and girls who have come down with their parents. Indeed, it may be said that the parents were especially eager to seize the opportunity for employment offered by these plants because it would give them a chance to secure an education for their children, and thus enable them to lift themselves out of the kind of existence their parents have had to bear.

In laying the basis for Kingsport's schools, it was wisely decided to secure the best possible educational system that could be obtained, including modern, well-equipped school buildings. Up to the present time \$500,000 have been invested in the school plant. This includes a central high school building housing the junior and senior high schools. It contains twenty class rooms, with a large auditorium,

household arts department, standard size gymnasium, lunch room, manual training department, mechanical drawing room, library and clinic room.

There are two grammar grade buildings, thoroughly modern and up-to-date, each containing eighteen rooms, with special rooms for shop work, cooking and sewing, large play rooms, clinic rooms and lunch room.

The organization is based on the 6-3-3 plan, which provides for six grades in the elementary schools, three in the junior high and three in the senior high school.

The special features of the junior high school include departmental work, specialized teachers, varied and wider curriculum, elective courses and promotion by subjects.

In the senior high school courses are offered in Latin, science, general, commercial, industrial and home economics.

The school system has a rating on the accredited list of the Southern Association of Colleges and Secondary Schools.

Certain standards have been established for the qualifications of teachers. The minimum qualifications for teachers in the elementary schools require graduates of accredited high schools, plus at least one year of professional training in a normal school or college, together with at least one year of successful school experience. The minimum salary for these teachers is from \$675 to \$1200 a year.

The minimum qualifications for junior high school teachers require that they be graduates of accredited high schools, plus at least two years in a college or normal school, with at least one year of successful school experience. The salaries for these teachers range from \$900 to \$1500 a year.

The minimum qualifications for senior high school teachers require that they be graduates of approved colleges or universities with A. B. and B. S. degrees. The minimum salaries range from \$1000 to \$2400 a year.

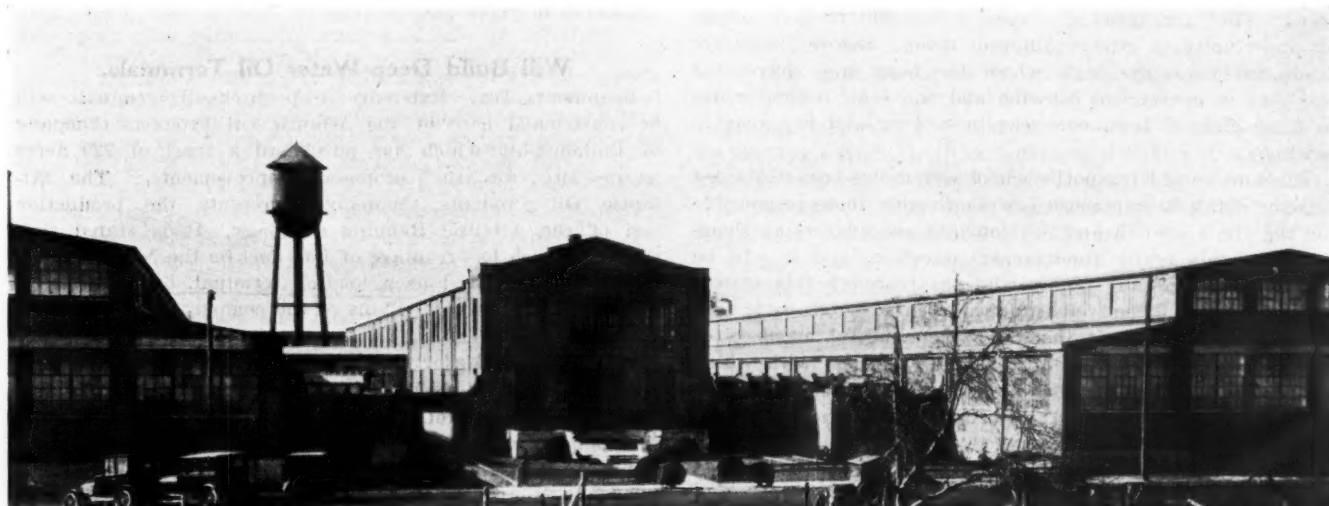
The system also provides for special supervisors in music, fine arts, writing, physical education and industrial arts.

A health department provides for special clinic rooms in each school, a school physician, school nurses and attendance officer.

To meet the vocational demand departments are provided for commercial work, including typewriting, shorthand and book-keeping; shopwork and mechanical drawing; domestic science and domestic art; and industrial art. These also contribute to worthy home membership.

The worthy use of leisure is taken care of by reading habits formed in English work; study of history, which also contributes to citizenship through civics instruction; glee club work, including instruction in music; industrial and applied art, and fine arts.

From the foregoing it will be seen that the aim of this

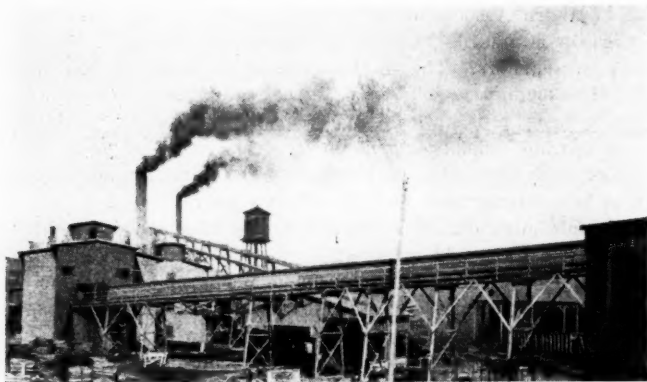


FRONT OF PLANT OF KINGSFORT PRESS SHOWING THREE BIG WINGS.

school has been to make its first duty to prepare the pupils to live in civilized society the most useful lives possible; but to live these lives certain requirements must be met. The Kingsport system has been developed to meet the following generally accepted requirements: health, command of fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure, and ethical character.

To take care of health education the following program is followed: regular gymnastic work, including calisthenics, folk dances, posture drills, corrective and preventive work; athletic sports, including foot ball, basket ball and track work. There are a school nurse; city health officer and assistants; and hygiene and physiology instructor.

Under the subject of command of fundamental processes, which are studied by everyone in the seventh and eighth



CONVEYOR FOR CARRYING SPENT CHIPS FROM TANNIC ACID PLANT TO PULP MILL.

grades of the junior high school, it is hoped to put at the command of the pupils that fund of knowledge necessary to enable them to understand and appreciate our national ideals, customs and aspirations. The aim is to give them a body of fundamental knowledge which will enable them to perform efficiently the ordinary duties which are assigned to all of us by our membership in American society.

In the senior high school the courses are sufficiently diversified to meet the ordinary demands of the community. To prevent the pupils from specializing too early or before they have really looked into the line of work which they are thinking of following, certain minimum requirements are prescribed. All pupils are required before graduation to pass creditably at least three units in English, two and one-half in mathematics, two in science, two in foreign languages, four out of six years (beginning with the seventh grade) in physical training. The remaining units of the sixteen required may be chosen from any of the six courses offered. This arrangement makes it possible to give pupils an opportunity to explore different fields. Before pupils are graduated from the high school the boys must have had one year in mechanical drawing and one year in shop work, and the girls at least one year in cooking and one year in sewing.

This outline of Kingsport's school system has been explained in some detail to emphasize how thoroughly those responsible for the city's growth and development are addressing themselves to this really fundamental question, and it will be readily seen that any pupils who pass through this system to graduation will be well equipped with a sound, basic education that will permit them to become useful members of society in various walks of life. The eagerness with which the people of this mountainous section have taken advantage of employment in Kingsport in order to obtain an education for their children is emphasized by the fact that the enrollment in the schools numbers 1200 white and 100 colored children in the elementary schools and 300 in the junior and senior high schools.

This educational system, coupled with the splendid co-

operative work by all the industries in Kingsport providing for health, life and accident insurance for everyone employed, shows how very thoroughly those behind Kingsport's development are looking to the future by endeavoring to build knowledge and character into those who live and work here. In connection with the insurance feature, which is handled by the Metropolitan Life Insurance Company, a physician and two nurses are provided. Clinics are held at various intervals in order to instruct the parents in hygiene, sanitation, diet, care of children, and especially those things that will make for the prevention of disease—particularly communicable diseases. The nurses keep in constant touch with the residents of Kingsport, both through reports coming to them from the physicians and through information furnished by the school authorities.

The religious life of this community is also especially noteworthy. Large, handsome church edifices have been provided by the various congregations. The Sunday school and services attendance is unusually large. Too much stress cannot be laid upon the effect which such attention to the building of character in the future residents of Kingsport will have, not only upon the future of the city itself, but also upon the influence it will exert throughout this mountain region.

Many great men have come from the sturdy stock of these mountain regions and have filled high places in the educational, religious and business activities of all parts of the country. Their inborn traits of rugged honesty, simple faith and thorough self-reliance, coupled with the severe and unequal struggle they have had to wrest a living by the difficult and unremunerative task of tilling the soil of the mountain sides, make them responsive to a remarkable degree to opportunities offered for improvement and better living and the chance of educating their children. Given this opportunity they have well rewarded their benefactors by a loyalty and devotion to duty not surpassed by the people of any other section of America. How much better it is to open up such opportunities right here in these mountain regions instead of causing these natives to go elsewhere. An all-wise Providence has endowed the whole Appalachian section with remarkable mineral, timber, coal, water-power and other resources that offer the bases for many varieties of successful industries.

Kingsport is an outstanding example of what can be accomplished in building an industrial center that is proving a success in every way. Kingsport is going to live and steadily expand because those who are shaping its destiny have had the foresight and wisdom to build for the future by giving opportunity and education to these mountain people and enabling them to have a real part in developing the resources of their own section.

Will Build Deep-Water Oil Terminals.

Beaumont, Tex.—Extensive deep-water oil terminals will be constructed here by the Atlantic Oil Products Company of Philadelphia which has purchased a tract of 229 acres as a site for the proposed improvements. The Atlantic Oil Products Company represents the production end of the Atlantic Refining Company. It is stated that the site, which has frontage of 1800 feet on the Neches River, will be used at first as a loading terminal, but later a refinery may be erected. Plans of the company have not fully matured.

Permission of Major L. M. Adams, United States Engineer in charge of this district, has been obtained to go ahead with the construction of docks from which the tankers of the company will load.

A pipe line from the oil fields of Arkansas and northern Louisiana is already under way. A line to the Mexia field may follow the completion of the one now under consideration.

General Nelson A. Miles on Prohibition.

A BRILLIANT PRESENTATION BY ONE OF AMERICA'S GREAT GENERALS OF THE CURSE OF WHISKEY, BEER AND WINE.

[General Nelson A. Miles, Lieutenant-General of the United States, one of the outstanding figures in the history of this country, with an experience in studying army matters not surpassed by that of any other living man, has written for the Manufacturers Record the following superb presentation of the evils of the liquor traffic, whiskey, beer and wine included. No man can possibly question the ability of General Miles to have studied this problem in connection with army life. No man can question the accuracy of his portrayal of the horrors which the whole liquor traffic from beginning to end has brought upon every man and every section and every country where the use of liquor has prevailed. We commend to the honorable, intelligent men and women of this country, who want to see it saved from the curse so forcibly described by General Miles, the careful reading of this vivid picture of the evils of the liquor traffic and then unitedly to stand for the rigid enforcement of our prohibition laws with a determination that they shall never be repealed, but that they shall be, by virtue of the power and influence of law-abiding citizens, more vigorously enforced than they have ever been.—Editor Manufacturers Record.]

Washington, D. C., January 1.

Editor Manufacturers Record:

While the commendable temperance reform was advocated by farseeing public-spirited men and noble women for ages in the past, yet it was not until the present epoch that the world was to witness the accomplishment of that great achievement. One hundred years ago liquor was in almost every home in our country and its pernicious influence affected every community.

I quote from a Regulation published in 1814 for the government of the Army, in which the regular daily allowance for every soldier was one gill of rum, whiskey or brandy furnished by the Government as part of his daily rations. Every lieutenant was allowed two rations; captain, three; major, four; lieutenant-colonel, five; brigadier-general, twelve; major general, fifteen; or its equivalent in money.

The corrupting influence of the liquor traffic became so general and arrogant that in the year 1863, the Liquor Dealers National Convention assembled at Buffalo, New York, and published a threat by declaring "as a policy that after that convention, they would not give their support to any party or any man who did not stand for their interests."

In the Army at every military post, the sutler's establishment kept and disposed of all kinds of intoxicating liquors to the injury and demoralization of the service.

February 8, 1876, in answer to inquiries on Army Reorganization, etc., by the committee on Military Affairs, House of Representatives, First Session, 44th Congress, referring especially to the sale of alcoholic liquors on military reservations and at military posts, by post-traders, I stated that "under the head of reforms, the following subjects would seem to demand some attention:

"At nearly every military post there is established under authority of law, a trader's drinking saloon for both officers and men. The injurious influence of this is apparent.

"The records of the military courts will show that the greater number of offenses in the army can be traced directly to those establishments. It is therefore recommended that the selling of alcoholic liquors be prohibited on all military reservations, and at every military post, as has been done on ships of the navy with most advantageous results."

On the evening of February 22, 1881, Colonel Thomas Barr of the Judge Advocate General's Department, U. S. Army, went with me to the White House and had a most interesting consultation with the chief executive. We explained to him the evil effects of liquor in the army; how it caused most of the military offenses and desertions; finally he turned to his desk and wrote the following order:

Executive Mansion,

Washington, 22 February, 1881.

To the Secretary of War:

"In view of the well-known fact that the sale of intoxicating liquors in the Army of the United States is the cause of much demoralization among both officers and men, and that

it gives rise to a very large proportion of the cases before general and garrison court martial, involving great expense and serious injury to the service, it is therefore directed that the Secretary of War take suitable steps as far as practicable consistently with vested rights to prevent the sale of intoxicating liquor as a beverage at the camps, forts, and other posts of the army."

R. B. HAYES.

President Hayes then gave me the pen with which he wrote the order and I have it still in my possession.

This order prohibited the sale of alcoholic liquors but it left light wines and beer. It was an important advance in the right direction. Leaving light wines and beer is what many people are advocating now, but it would be a step backward in human progress and the opening of the door for greater evils. Wine and beer, if taken in excess—as they often are—like stronger liquors, destroy moral restraint, inflame the vicious elements of man's nature, ruin character and homes.

Later, with Colonel L. Mervin Maus, General Aaron S. Daggett, and others, I recommended that the sale of those liquors be discontinued, which was done by act of Congress approved February 2, 1901, and published in General Orders. During several years following, great efforts and strong influences were used by high authorities to induce Congress to restore the sale of light wine and beer, but Colonel L. Mervin Maus and others produced such damaging evidence from the official records of their evil effects that the effort was abandoned.

At this time we may well quote a few of the million witnesses whose testimony condemns this world-wide iniquity. Shakespeare in "Othello," says:

"Oh God, that men should put an enemy in their mouths to steal their brains! that we should, with joy, revel pleasure and applause, transform ourselves into beasts!"

And again:

"O thou invisible spirit of wine, if thou hast no name to be known by, let us call thee devil!"

Gladstone drew the comparison between the evil inflicted by the liquor traffic and the "accumulated evils of three great historic scourges of mankind; war, pestilence and famine." And Gladstone added these significant words, "This is the measure of our degradation and disgrace!"

Wesley, dealing with the liquor traffic and liquors, declared, "All who sell them in the common way, to any who will buy, are prisoners general; they murder his Majesty's subjects wholesale; neither does their eye pity or spare. They drive them to hell like sheep. And what is their gain? Is it not the blood of these men? Who then, would envy their large estates and sumptuous palaces? A curse is in the midst of them."

More than twenty years ago a board of experienced army officers made an official visit to seventeen of the state peni-

tentiaries in this country to examine the system of government, architecture of the buildings, etc., etc. During that tour there were seen more than twenty thousand men behind prison bars, serving long sentences from five years to life imprisonment. The consensus of the reports and opinions of the keepers, wardens, and convicts was that "the most of the crimes they had committed and for which they were serving sentences, had been committed when they were under the influence of liquor."

In the public press not long ago there appeared a brief poem written by a convict in Illinois. You will notice he has a brilliant intellect and evidently has enjoyed the blessings of home and yet you will observe a vein of despair in the few expressive lines he has written. He says:

"The Saloon is sometimes rightly called a bar."

"A bar to Heaven, a door to Hell,
Whoever named it, named it well.
A bar to manliness and wealth
A door to want and broken health.
A bar to honor, pride and fame
A door to grief and sin and shame.
A bar to all that is true and brave
A door to every drunkard's grave.
A bar to honored, useful life
A door to brawling senseless strife.
A bar to home, a bar to prayer
A door to darkness and despair.
A bar to all joys that home imparts
A door to tears and broken hearts.
A bar to Heaven, a door to hell,
Whoever named it, named it well."

Recently in our courts of justice, an eminent judge, in sustaining the verdict of the lower Court upon a man charged with the murder of his father and seriously injuring his mother in a drunken row, said:

"It (whiskey) is a hydra-headed and remorseless monster which with ceaseless and tireless energy, wastes the substance of the poor, manufactures burdensome taxes for the people, monopolizes the time of courts, fills the jails, penitentiaries and asylums, destroys manhood, terrorizes helpless women and innocent children, and mocks the law. Answering its inexorable demands, each day new widows mourn, new orphans cry, new wrongs strike Heaven in the face."

I will quote from an argument made by Colonel Robert Ingersoll, delivered at Chicago in 1876:

"I believe, gentlemen, that alcohol, to a certain degree, demoralizes those who make it, those who sell it, and those who drink it. I believe from the time it issues from the coiled and poisonous worm of the distillery until it empties into the hell of crime, it demoralizes everybody that touches it. I do not believe that anybody can contemplate the subject without becoming prejudiced against this liquid crime. All you have to do is to think of the wrecks upon either bank of this stream of death, of the suicides, of the insanity, of the poverty, of the ignorance, of the little children tugging at the faded dresses of weeping and despairing wives asking for bread, of men it has wrecked, of the millions who have struggled with imaginary serpents produced by this devilish thing. And when you think of the jails, of the almshouses, of the prisons and of the scaffolds upon either bank I do not wonder that every thoughtful man is prejudiced against the damned stuff called alcohol."

One more witness, the immortal Lincoln, delivered one of the strongest temperance lectures ever proclaimed by man in our country on February 22, 1842, before the Martha Washington Temperance Society of Illinois, in which he referred to the splendid enterprise then progressing in the cause of temperance by saying:

"If the relative grandeur of revolutions shall be estimated by the great amount of human misery they alleviate and the small amount they inflict, then, indeed, will this be the grandest the world has ever seen. And when victory shall be complete, when there shall be neither a slave nor a drunkard on earth, how proud the title of that land which may truly claim to be the birthplace and cradle of both these revolutions that shall have ended in that victory! How nobly distinguished that people who shall have planted and nurtured to maturity both the political and moral freedom of their species."

A few hours before his cruel assassination, he said: "After reconstruction the next great question will be the destruction of the liquor traffic." We appear to be witnessing the ful-

fillment of the prophesy, hope, and prayer of that pre-eminent statesman and martyr.

To realize the beneficence and glory of this great reformation that has been wrought, we must consider the depths of our national degradation only a few years ago. It was reliably estimated and authoritatively stated that the liquor traffic was costing our nation approximately 2000 lives daily. That England spends annually £40,000,000 sterling for corn and £100,000,000 for liquors. What it has cost our nation and its people in the ruin and waste of human life, in the gloom and ruin of homes, in poverty, distress, suffering and crime is beyond comprehension.

There have been innumerable protests and appeals against the manufacture, traffic and use of alcoholic liquors of all kinds. Divines, statesmen, teachers, philosophers, and patriotic citizens have condemned them, and have prayed and petitioned for their removal.

The noble men and women who, following the leadership of Dr. Lyman Beecher, Senator Henry Wilson Neal Dow, John B. Gough, Mrs. John B. Henderson, Miss Frances E. Willard and others, have advocated temperance and opposed the traffic and use of that national curse, liquor, have rendered the great Republic and its people the greatest blessing. Its prohibition was strongly advocated and first permanently established in the State of Maine, and then in the southern and western states, and the supporters of that splendid measure are entitled to the greatest credit.

Those who by their heroic efforts, intelligent advocacy and, in many instances, sacrifice, have spread a tidal wave of temperance over this fair land of ours are entitled to the highest honors of those now living and the eternal gratitude of those who shall follow in the great future. By their heroic efforts they have spread the rays of light where the dark shadows of intemperance had created gloom, crime, poverty, desolation and despair. They have brought back the color to the pale faces of the distressed mothers, wives and children—put smiles on those faces instead of tears, they have given joy, health and hope in place of misery, they have restored the likeness of God to the bloated faces and given happiness to desolate homes. The prayer and petitions of the patriotic noble-hearted citizens of our beloved country have been heard by the statesmen in the legislative and executive departments of our states and the general government. Wise and judicious laws have been enacted and placed upon the statute books and in amendments to the states and Federal constitutions that will forever suppress and eradicate the evil.

America has advanced to a higher and purer civilization. It passed the Prohibition Amendment to the Constitution by an 84 per cent vote in the Senate and an 80 per cent vote in the House of Congress, that ratified by the States in a vote of 5027 against 1147, became the supreme law of the land, and there it will remain, thanks to the patriotic statesmen who wisely designed and enacted the judicious legislation. Senator Morris Shepard of Texas, Senator William S. Kenyon of Iowa, and Senator J. H. Gallenger of New Hampshire, and Congressmen R. P. Hobson of Alabama, Edwin Y. Webb of North Carolina, A. T. Smith of Idaho, and Andrew J. Volstead of Minnesota, and their compatriots will ever be entitled to distinguished honors by the American people. Some of the bartenders who for years stood behind the bar and sold poisons to thousands of men, young and old, that they knew were blasting lives, ruining homes, and causing poverty and crime are now engaged with other criminals in breaking the laws, but it is the sacred duty of all executive, national and state, officials to execute the laws and imprison the criminals. It is the sacred duty of all patriotic citizens to respect and obey the law of the land.

The beneficent blessing of this modern reformation is al-

ready evidenced in a thousand ways. I will mention a few:

(National Advocate, July, 1922)

SOME FACTS ABOUT WORLD PROHIBITION.

"The President of the new republic of Austria, D. M. Hainisch, sends the following: 'My message to America is this—stand firm by prohibition, enforce the law, because in proportion as you enforce it there will be a decrease in criminality, pauperism, insanity, and other things that make ill of human society. I regard the Eighteenth Amendment of the Federal Constitution of the United States of America as one of the greatest and far-reaching pieces of legislation ever enacted by any nation of the civilized world.

"I realize more and more that the world is one great family. Let us pull together and help one another when help is needed."

(Extracts from the International Record.)

"The government of Denmark has invited the next International Congress against Alcoholism to be held in Copenhagen in 1923 and the Danish Parliament has appropriated 25,000 kroner to assist in entertaining the delegates. This congress has the official recognition of most of the governments of civilized countries. When it met in Lausanne, Switzerland in 1921, the United States was represented by ten delegates appointed by President Harding.* * *

"Dr. S. Ducker, A German authority says: 'The introduction of prohibition into the United States has been watched with some sympathy by most classes of Germans except those interested in brewing, workmen employed by them, and German beer lovers. The prohibition movement has passed from America to Europe and daily wins more support among the working classes. More people in Europe are beginning to realize that through drinking, much energy, enterprise and intellectual power are lost.'

"In Greenland both the local and national authorities have prohibited the importation of any kind of intoxicating liquors and the introduction of spirits for any purpose is made a penal offense.

"The President of Chile says, 'I am not afraid to declare that I will do battle with undying energy for the saving of the race against alcoholism. When I say I will wage war against alcoholism I start by preaching by my acts as well as by my words. Some years ago I became owner of 125 square meters of vineyards and in consequence of my ideals I had all of the vines uprooted and walnuts planted instead.'

"The President of Uruguay in an address to the Republic said: 'Fellow citizens, to preach against alcoholism by word and deed should be the aim of all interested in the improvement of the human race. Therefore, I hope that Uruguay will be the next nation to adopt a law prohibiting the manufacture and sale of alcoholic liquors.'

"There is a great awakening in India in regard to prohibition. In the Bengal Council a resolution favoring prohibition was lost by only 6 votes. A resolution to restrict the consumption of alcohol passed the same Council without division.

"A measure restricting the liquor traffic in Holland under a direct veto law passed the lower house by a vote of 39 to 29, but was defeated in the Senate by a vote of 18 to 17. It is believed that the tremendous campaign of falsehood and misrepresentation concerning prohibition in the United States was responsible for the failure of the measure.

"The agitation against the liquor traffic in Ireland by all parties is one of the gratifying developments recently. 'Ireland sober is Ireland free,' says A. M. Sullivan, the great Irish orator, and Mr. Wigham says: 'Ireland cannot be free even though she makes her own laws while she harbors the liquor traffic.'

"The movement for the amendment of the Swiss constitution to enable the people of each commune to prohibit the manufacture and sale of distilled liquors is taking shape. A petition signed by 146,000 people is to be followed by a popular referendum.

"Prohibition is making rapid and encouraging strides in Mexico, Central America and other Latin American countries as well as in New Zealand, Australia, Sweden, and several of the newly formed states in Europe.

"Four important acts in the life of the late Czar Nicholas II of Russia will justly immortalize his name down through the corridors of time; first, when he was autocrat of all the Russias he called a meeting at the Hague to settle international controversies by arbitration, and to relieve the people from the burden of great standing armies and the horrors of war; second, he encouraged the establishment of a constitutional government; third, he inaugurated a system of granting homesteads to settlers upon the vast unoccupied territory;

fourth, when Russia was drunk with Vodka, and the government receiving \$325,000,000 yearly revenue from its manufacture and sale, he, against most powerful opposition abolished its use and made that vast empire free from its evil effects. Notwithstanding these most beneficent acts, the emperor with his entire family was later cruelly imprisoned and finally all murdered.

"Prohibition in United States.

"The MANUFACTURERS RECORD of Baltimore, Md., issued a 10-page magazine containing a survey from the economic and moral standpoint of prohibition in the United States. This is perhaps one of the most important and comprehensive publications of its kind yet issued. It contains the written opinions verbatim of hundreds of business and professional men concerning the results of prohibition.

"The replies are summarized as follows:

	Per Cent
For Prohibition in Some Form	98.50
Against Prohibition	1.50
For Strict Prohibition	85.50
For Beer and Wine	7.00
Against Volstead Law of Present Regulations	1.25
Wants Volstead Law Modified75
Advocates High License or Governmental Control ..	1.00
Advocates Dispensary System25
Undecided or Noncommittal	2.75

The following paragraph from the President of the United States is of striking importance and significance, and in view of the diligence and care with which prohibition in the United States is being studied throughout the world, and it may be taken as the unbiased expression of opinion of one who is in a commanding position to observe the trend of thought in America:

"In every community men and women have had an opportunity now to know what Prohibition means. They know that debts are more promptly paid; that men take home the wages that once were wasted in the saloons; that families are better clothed and fed, and more money finds its way into the savings banks. The liquor traffic was destructive of much that was precious in American life. In the face of so much evidence on that point what conscientious man would want to let his own selfish desires influence him to vote to bring it back? In another generation I believe that liquor will have disappeared not merely from our politics, but from our memories."

Another survey of importance was made by H. S. Warner of the colleges and universities in America. Replies were received from 158 of these higher institutions of learning in 40 states showing the following:

"Favorable to Prohibition, 136 institutions with 142,000 students.

"Unfavorable, 8 institutions with 16,000 students."

Extract New York Evening Post:

New York Evening Post, January 30, 1920.

Washington, January 30.—The effect of prohibition enforcement in California, according to a survey by S. F. Rutter, State Director, based on juvenile court statistics and testimony of probation officers, divorce court judges, and welfare commissions, is "most apparent in that broad region of wretchedness and unhappiness which intervenes between private domestic happiness and public prisons" rather than "in the records of the more serious crimes."

The survey, which was made public today by the information bureau of the prohibition unit, says the annual number of arrests for drunkenness in California declined from an average of 27,308 in the three years prior to prohibition to 14,485 in the three subsequent years, while juvenile court cases declined from 1599 to 1538.

Deaths from alcoholism in the two years immediately following the beginning of prohibition enforcement, it says, averaged fifty-three a year, while in the five preceding years the average was 205. Alcoholic insanity cases averaged thirty-eight in the first two post-prohibition years, against seventy-two in the three pre-prohibition years. The increase in bank deposits in the three years succeeding prohibition, as compared with the three preceding, averaged 48 per cent, with the number of depositors gaining 37.7 per cent.

The Washington Times of November 6, 1922, stated that in Massachusetts some facts have been collected showing that among men drunkenness has diminished 55 per cent; among women, 69 per cent. Of every 100 men in prison before prohibition, 52 are now out of jail and at work. Of every 100 women in jail before prohibition, 60 are now free, free from drunkenness, crimes and the prison stain. There are

other facts brought out by the same investigation. The beneficent results that have occurred in Massachusetts have occurred in all the States.

One more witness, Mr. Gifford Gordon came to the United States from Australia in 1921, with the express commission to scrutinize the operation of the prohibition amendment. He reports that his commission took him to every part of the country; that he traveled 25,000 miles visiting almost every large city. He reports as follows:

<i>Arrests for Drunkenness</i>			<i>Decrease</i>
New York, 1915	22,635		
" " 1921	8,169		
			14,466
San Francisco, 1919	17,354		
" " 1921	5,817		
			11,537
Detroit, 1916	17,409		
" " 1921	7,220		
			10,189
Des Moines, 1914	4,428		
" " 1921	1,949		
			2,479

The cities named are strategically situated in the East, the near West, the middle West and the far West of the country. They indicate a general decrease of offenses of this character of over 600,000 in the nation as a whole.

Twelve years before the amendment was enacted, there were 68 institutes for the treatment of 125,000 alcoholic patients. After two years of prohibition they had gone out of commission. In the same period 20 per cent of the nation's jails have had no prisoners, and in 80 cent of them, the number of prisoners has been reduced from 15 to 80 per cent. Workmen and artisans have given to their homes, wives and children, the full wages from which once drink took its greedy toll.

Volumes could be written demonstrating the same facts. I wish, sir, to thank you and your honorable associates for the important part you have taken in this most commendable reformation.

With best wishes, I remain,

Very truly yours,

NELSON A. MILES,

Lieutenant-General, U. S. Army.

Charlotte Enters Its Greatest Building Year—Permits for 1922 Over \$5,000,000.

Charlotte, N. C., Feb. 28—[Special.]—With the valuation of building permits totaling over \$5,000,000 for 1922 and with many new projects actually under way or to be started in the near future, Charlotte has the largest building program of any city in the state in volume and in aggregate cost.

Contractors, architects and building materials dealers all attest to the great activity which is reflected in the best business in their history. There is plenty of work for everyone who wants it—especially for those trained in the building trades. Throughout the city there is evidence of the vast amount of work going on. In the downtown section there are few blocks where some impressive new building, addition or improvement is not now under construction, and the undertakings are growing each day. Thus there are indications that 1923 will surpass the high record of last year by a big total.

Indicative of this building volume are the contracts held by J. A. Jones Construction Company, of this city, which is engaged on work throughout the state involving the expenditure of more than \$2,500,000, much of which is in Charlotte. This work includes the Citizens Hotel, a 12-story, steel frame structure with concrete floors to cost \$900,000. It will contain 254 rooms. Work is proceeding rapidly on the Ebird building, a five story and basement, reinforced concrete structure, 100 by 200 feet, estimated to cost \$300,000. The 8-story Professional Building containing 175 rooms, and to cost \$250,000, will soon be ready for oc-

cupancy. An ice plant is being erected at a cost of \$50,000 for the Standard Ice & Fuel Co. A warehouse building costing \$60,000, three stories high of mill construction, has just been started.

Other work is keeping pace with the building program as illustrated by the recent letting of paving contracts to cost \$750,000 to Blythe Bros., local paving contractors. Work will start March 1. Money is provided through the sale of \$800,000 bonds, \$100,000 of which is for sewers. Last year 23 miles of new sewer lines were laid. Tucker & Laxton were low bidders for sewers this year.

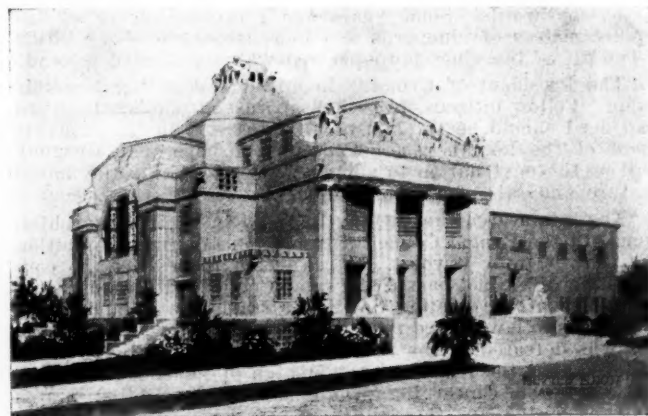
J. A. Gardner, local contractor is erecting a \$100,000 loft building for H. M. Wade, after plans by Lockwood, Greene & Co. It is 114 by 146 feet, and four stories high.

A Shrine Mosque to cost \$400,000 will probably be erected this year. Many elaborate apartment houses are planned for near future construction. Last year the Central High School was completed at a cost of \$300,000, and contract was let for the Second Ward School to cost \$113,000. Improvements and additions costing about \$40,000 were made.

Residential construction which last year totaled more than \$1,500,000 will figure prominently in the work for 1923. A comprehensive church building program has also been outlined. In fact, the year's activity as now indicated will include practically every kind of structure and form a well rounded development typifying the general expansion of the city and section.

Erecting \$300,000 Scottish Rite Cathedral at Miami.

Construction is now in progress on the \$300,000 Scottish Rite Cathedral at Miami, Fla., the corner stone having been laid two months ago. The structure is being erected at North River Drive and Northwest Third street and is 190 by



\$300,000 SCOTTISH RITE CATHEDRAL UNDER CONSTRUCTION
• AT MIAMI.

140 feet. It will be of fireproof construction, with a tile and stone roof and cement and tile floors.

Plans and specifications for the building were prepared by Kiehnel & Elliott of Pittsburgh, Pa., and the general contract went to John B. Orr of Miami. Directors of the Scottish Rite Cathedral Association of Miami, are W. E. Brown, president; John Seybold, treasurer, and A. O. Moore, secretary.

Will Build Oil Refinery.

Mirando City, Tex.—Preparations are being made by Oliver W. Killam, president of the Tex-Pata Pipe Line Company, a large producer of oil in the Mirando and adjacent fields, to build a refinery here. The proposed plant will have a daily capacity of 2000 barrels. It is also stated that the pipe line of Mr. Killam and associates may be extended south to the shallow oil field in Zapata County, where extensive development is now in progress.

Florida Everglades a Tremendous Natural Asset.

AGRICULTURAL AND STOCK RAISING POSSIBILITIES BESIDES OTHER OPPORTUNITIES ALONG THE ROUTE OF THE FLORIDA EAST COAST RAILWAY'S NEW EXTENSION.

The unlimited possibilities of development in the Everglades region as a result of the proposed extension of the Florida East Coast Railway, construction of which is impending, are so wonderful that the additional information embodied in a letter to the editor of the MANUFACTURERS RECORD from Vice-president J. E. Ingraham, and also in the accompanying article by H. S. McLendon, agricultural agent, will be of widespread interest, including not only Floridians but citizens of other parts of the country. Mr. Ingraham writes:

"I hand you herewith the article on the agricultural possibilities along the Florida East Coast Railway extension from Okeechobee south to Miami, and believe that our Mr. McLendon has touched upon this situation as forcibly and in a way that is fair and just to the possibilities of this great section which is so largely unknown.

"There is one point, however, to which I wish to call attention, and that is the cultivation of crops without the use of fertilizer. I have had a great many analyses made of Everglades soil, but never yet have found more than two and one fraction per cent of potash, and in a form hardly available for plant food, and as potash is absolutely essential for the flavor, color and carrying qualities of perishable products, I believe it will have to be furnished artificially in the shape of fertilizer, and if a man is going to undertake to farm in perishable products and fruits in the Everglades he will be disappointed, to say the least, if he does not use fertilizer. * * *

"It is an important question, one in which the State is tremendously interested, and, as Mr. McLendon says in closing, and as I believe, it is the greatest state asset and should be a tremendous influence in the immediate future. The lessons learned by the overflows of last winter have, I think, been beneficial and will be used to secure for the drainage project the deepening of many of the canals, the deepening and widening of some of the canals, and the pushing of the main control canal—that is the St. Lucie River Canal—to its early completion. The whole state is interested in this drainage work by reason of the fact that the sale of these lands which belong to the state will be a credit to the state treasury. On the other hand a very large proportion of the lands held by individual owners and corporations within the drainage limit are paying a very heavy tax, because the lands lie within the counties included in the drainage district. This is a special state drainage district, which is a very heavy burden unless the work be speedily consummated so the lands can be sold and put into cultivation."

The article by Mr. McLendon is as follows:

"The Florida East Coast Railway extension is a continuation of the Okeechobee branch from Okeechobee City, just north of Lake Okeechobee. The new line will leave Okeechobee City in a southeasterly direction, and after crossing the St. Lucie Canal it will follow close along the shores of the lake on the east side until several miles below the Palm Beach Canal, then it will lead out into the Everglades a little farther from the lake, crossing the canals, in a rather southerly direction until after the Miami Canal is crossed, and then will follow the south side of this canal until within several miles of Miami. There the line will divide, making a Y, one branch going to the main line at Lemon City on the north, and the other to Larkin on the south side of Miami.

"There have been a number of surveys made for this new line—the first about six years ago. At that time there was

very little development in the Everglades proper; in fact not much of the land was drained so that farming could be carried on with safety. There is a large body of virgin pine timber southeast of Okeechobee City, and this first line was surveyed through this timber to get it out and open up land lying in that territory, but it touched very little of the Everglades. This once proposed line came back to the main line at West Palm Beach. There was very little development at any place along the route.

"War conditions, high money and material as well as inefficient labor prevented the line from being constructed. Later, a few men who fished around the lake were interested in growing some vegetables on the higher land just back from the shores. These experiments proved that there could be fine crops grown with little cost, as no fertilizers were used and very little cultivation was done. Most of the expenses were incurred for breaking the land, planting the crop and for harvesting. Sometimes the most energetic men would pull the largest weeds just before they began to gather their crop. With these conditions existing it stood to reason that there would be people coming into this new territory fast, and such was the case, even if there was no way to get out what was produced, except via water, most of it going to Okeechobee, Ft. Lauderdale and West Palm Beach, until there was a line built into Moore Haven. Water transportation was very unsatisfactory. It was slow, which was costly with perishable crops, then at times the water was so low in some of the canals that it was hard and slow work to get out at all. During this time the State Internal Improvement Board, who have charge of the State Drainage work in the Everglades, were completing considerable of their plans and as their work progressed there were more people getting out into this great body of rich land. There had been for several years a great deal of sugar cane grown as well as fruit and truck crops; all of which looked very promising indeed. Therefore in 1921 two large companies decided to put in a large acreage of cane and erect a mill for each company. This was the situation when a new survey was started in 1922.

"With a great area of the richest soil to be found anywhere, lying just off the shores of the lake, and development proceeding with two sugar mills under construction, the only thing that was keeping more settlers from going into the region was the lack of transportation and better drainage. The Internal Improvement Board was trying to improve the drainage conditions as fast as it could get money to carry out the work and it stood to reason that there was cause to consider a change of location of the proposed railway.

"This was the condition that confronted the chief engineer, H. N. Rodenbaugh, now general manager of the Florida East Coast Railway System, when he started a new survey in 1922. There were also other conditions to be considered. The main line was getting very congested with freight from Cuba and from the increasing truck fields south of Miami. With a line built just East of the lake there was left a distance of about forty miles in most places that could divide its freight to both lines. Mr. Rodenbaugh informs me that with trucks and good roads this is proving not too great a distance to expect freight to come. Not only was this true, but the heavy freight could be diverted from the main line over this new line without any great loss in the haul, which would give the System a double line from Larkins to New Smyrna. That much for the history of the location of the

new line. Now something more of the country that is going to be opened up.

"J. E. Ingraham, vice-president of the Florida East Coast Railway, in its industrial department, and who is also president of the land companies owned by the Flagler estate, was associated with Henry M. Flagler during most of his great development along the East Coast of Florida, and knows conditions as they once existed in the Everglades, he making the first survey across the Everglades in 1892. Since then he has kept in close touch with such development as has been done in this great, rich and yet undeveloped country. His opinion is that there is no richer or more productive land to be found anywhere in the world, unless it be in the Nile Valley or Delta. Mr. Ingraham has great faith in the development of this great area of Everglades lands, and is very optimistic as to its future.

"The land to be found in the Florida Everglades is generally divided into four different classes according to the growth upon it: 1st, custard apple; 2nd, elder and willow; 3rd, weed, and 4th, saw grass. I have named them in order of their importance from an agricultural stand point. At least this is true according to our present knowledge of these lands. The relative acreage represented by each class would be found by reading back from the last; there is more of the saw grass land than all the other three put together.

"Generally we will assume that the land in the Everglades was formed in two ways. The custard apple land was formed by deposits of shell from the small inhabitants of the large, fresh water lake with sand and all kinds of vegetation either washed up or which grew along the shores. Therefore, this type of land is found in varying outlines, as it represents the old or original shores of the lake, which changed as time went on. This land was gradually elevated above the water, unless it be at extreme high water; then the custard apple tree began to grow and more humus was added to enrich the already fertile soil. This is then the oldest and most fertile type of soil found in the Everglades; it contains considerable mineral.

"The other types or classes of land were formed by the growth and accumulation of aquatic plants and grasses. The saw grass land is formed by the growth of that grass almost exclusively. This is a very tough, coarse grass that can grow in deep water and will thrive if the water gets rather shallow at times. Water has been so deep on this kind of land most of the time that very little decomposition has taken place; thus its poor quality from an agricultural standpoint.

"The weed land is found between the saw grass and the elder. Its composition seems to be about the same as that of the saw grass, only it is more decomposed. Saw grass land will, after it has been plowed and drained for a few years, begin to produce weeds.

"The elder and willow land is a little higher land than the weed land and it was formed by the growth and decay of several different kinds of aquatic plants. This type is found bordering on the custard apple land, and has been out of deep water for some time, therefore decomposition is pretty well advanced, and it will produce fine crops, still there is not the mineral matter found in it such as is found in the custard apple land.

"The largest bodies of custard apple land to be found in the Everglades are along this new line of road. When you remember that people were growing crops on this type of soil at places forty to sixty miles from the nearest station from which they could ship their produce, and the most of it was perishable, you can realize that there must have been some naturally good land to be found in the Everglades. This and the elder and willow land are the types that will produce the most of the tonnage in the next few years, in my opinion.

"When you consider that the Pennsylvania Sugar Company went out into the Everglades about ten miles from Miami and located a big sugar mill on the Miami Canal, planted something over 3000 acres of sugar cane, bought near 200,000 acres of land up there, and still no railroad, and the Florida Sugar Food and Products Company went out to the shores of Lake Okeechobee, put up their mill on Palm Beach Canal, put in a large acreage of cane, and no railroad within forty miles of their location, you can appreciate that there must be some great possibilities out in this great big unknown country, the Florida Everglades. Both of the above mills will be in position to mill cane from the crop that is now coming to maturity.

"I have seen forty to fifty tons of cane grown to the acre on the best land, from forty to sixty bushels of corn, heavy yields of all classes of truck and vegetable crops, great bunches of bananas, fine avacadoes and citrus fruit, all without any fertilizers. Therefore you can be sure that just as soon as there is a line of railroad to furnish transportation, there will be plenty of people to put this land under cultivation.

"While all the crops that I have mentioned do well and a great many others that have not been itemized will thrive—my opinion is that the greatest future is in the production of sugar cane to be manufactured into sugar, and the raising of livestock including poultry. When land will carry two to four cows per acre, for most of the year, on such grasses as Giant Bermuda, Para, Rhodes, Dallas and a number of others that thrive on this land, and there are some of as good markets as can be found any place right at your door, what more do you want! There are the tourist towns of Miami, Palm Beach, and West Palm Beach, not to mention small towns that will soon be cities. The poultry that can be produced with your skimmed milk, the grain and green feed that can be produced, the large yields of silage that can be secured per acre and the good market for high class beef, are all potent facts. What better can a livestock farmer expect to get! Florida is importing over \$10,000,000 worth of dairy products annually, and poultry products in proportion, and there is a big field outside of the East Coast of Florida.

"The large canals that are being constructed by the State do not completely drain the Everglades. These canals were built for the main controls and outlets. It is up to the individuals to construct their own farm ditches. There is another feature of this great big drainage undertaking that is not generally known by the public, or else is overlooked—the matter of using the large body of water in Lake Okeechobee—which is the largest fresh water body in the United States south of the Great Lakes—as a reservoir from which water can be secured for irrigation purposes in the Everglades, if the time comes when that is necessary. The present drainage plan of reclamation was made with that in view. It has been found that the wet and dry years go and come here in Florida in cycles of something like ten years. There are being constructed locks in the canals that will maintain the water level in the lake, thus there will always be water available for irrigation.

"These drained Everglades lands should appeal particularly and forcibly to the Western farmer and stock raiser. The climate is equable and mild; the growing season is practically eleven months in the year, so that green crops can be under cultivation all the year around, practically. There are never any blizzards, such as are common to the northwest, and few if any shelters will be needed for highgrade stock. During the rainy season, which is in the summer, the rains do not fall continuously, but are usually in the shape of very hard showers that fall two or three times, generally in the afternoon, seldom at night, and, where the land is properly drained, there should be no floods to interfere

with the safety and welfare of cattle or of growing crops.

"This country is new but there are now being highways constructed through it, which will be hard-surfaced so that traffic can be carried from these lands to the nearest shipping point; telephone lines are also being constructed, and will soon be available. Small towns are being established, which will soon grow into considerable centers of population, it being thought wise in this territory for the farmer to live in a town, that his family may have the advantages of schools, churches, and society, rather than live on isolated plantations.

"One of the greatest troubles that I foresee, however, and which should be guarded against as much as possible, is the possibility of men going onto these lands and cultivating them before the lands are in proper shape for development. The State drainage is not yet complete, although there are large tracts that are ready for sub-drainage districts, nor will it be complete for some time. It is hoped that at the next session of the Legislature, which will convene in April of this year, that such additional appropriations will be made by the State, as will enable the State Drainage Commission to carry on this drainage with greater efficiency, and expedite it very considerably.

"It is also hoped and expected that the next Legislature will provide an appropriation for the establishment of a demonstration farm in the Everglades, which will enable settlers, farmers and prospectors, to get some definite, efficient and reliable information as to what can be grown with profit on these very fertile lands.

"I think and believe that the Everglades of Florida will be in the not distant future the greatest asset of the State of Florida."

\$400,000 Granby Street Market Now in Operation at Norfolk.

Market facilities at Norfolk, Va., have been notably augmented by the recent opening of the new Granby Street Market erected by J. H. Cofer at a cost of more than \$400,000, ranking in cost with the new city market at Norfolk now under construction. The Granby market is thoroughly modern in construction and equipment and is 200 by 183 feet covering nearly a city block. The building is a single story structure located between Ninth and Tenth streets on Granby and extends from Granby street to Monticello avenue, with entrances on Granby street, Ninth street and Monticello avenue.

Three sides of the building are almost entirely of glass, providing ample light for all purposes, and the floor is of smooth concrete. Rows of individual retail stalls, with wide passageways between, extend north and south the entire length of the building, the lower portion of each stall being

of glazed brick and the upper portion of iron grille constructed with a cage effect. The retail stalls total 59 and on the arcade, on the Monticello avenue side, space has been reserved for a number of Dunkards and Mennonites who will sell their produce from the stands. In the arcade provision has also been made for a wholesale store which has already been leased, as well nearly all the retail stalls.

The new market was designed by B. B. Spigel of Norfolk. S. L. Nusbaum & Co., are the agents and A. J. Wood is the superintendent.

\$600,000 for Survey Work on Texas Rivers as Aid to Reclamation of Overflow and Arid Lands.

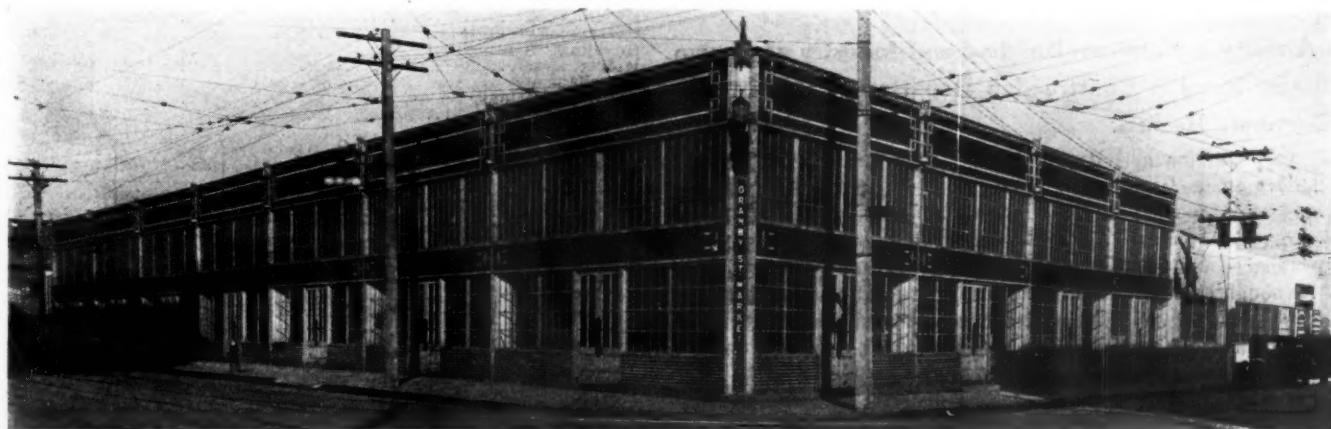
Austin, Tex.—An appropriation of \$600,000 by the Legislature has been made for topographic and hydrographic surveys of the overflow and arid lands of the state, the work to be performed under the State Reclamation Department and the State Board of Water Engineers. According to Arthur A. Stiles, state reclamation engineer, there are 3,500,000 acres of overflow land in Texas, of which about 500,000 acres have been surveyed.

The first survey work to be undertaken in the matter of flood control will be along the lower stretches of the Colorado, Brazos, Rio Grande and Trinity rivers.

Mr. Stiles estimates that the engineers of the state reclamation department will be able to survey from 250,000 to 500,000 acres annually during the next two years and that these surveys will clear a way for the organization of levee districts. It is believed that the construction of levees would increase the value of this overflow land \$100 an acre. If this estimate is correct such construction along the lower stretches of the Texas rivers during a period of years would add \$350,000,000 to the state farm values. The program as outlined for the next two years should increase the land value of the river valleys to the extent of \$700,000 or more.

Coal Company to Increase Capital From \$2,000,000 to \$2,500,000 and Make Improvements.

Huntington, W. Va.—An increase in capital stock of the Coal River Collieries Company, Harry Leaberry, Pres., from \$2,000,000 to \$2,500,000 will be used for additional development of the company's coal properties on Coal River where it owns about 10,000 acres. Stock in this company is owned by members of the Brotherhood of Locomotive Engineers. Extensive improvements are being made at the seat of mining operations, where a twin tippie of steel is nearing completion. Shipments of coal are expected to begin within the next few weeks. A model mining town is also being built.



GRANBY STREET MARKET AT NORFOLK ERECTED AT COST OF OVER \$400,000.

Alabama Coal Miners to Get Wage Increase.

Birmingham, Ala., March 5.—[Special.]—Effective March 16, the coal mining companies of the Alabama fields will give an advance in wages to their mine workers ranging from 12½ to 15 per cent. The increase will be material and will add considerably to the amount paid out semi-monthly here. The Tennessee Coal, Iron & Railroad Company announces an advance for coal and ore miners and in quarries. A statement by President George Gordon Crawford follows:

"Effective March 16, 1923, an adjustment of wages will be made in the coal mining division, brown ore mining and quarries division and the red ore mining division of the Tennessee Coal, Iron & Railroad Company. Pick mining in the Pratt division will be increased from 82c to 94c per ton and shooting and loading from 61c to 70c per ton. Pick mining in the Mary Lee seam will be increased from 73c to 84c per ton and shooting and loading from 50½c to 58c per ton. All hourly rates will be equitably adjusted to average a 12½ per cent increase.

"No salaries will be adjusted except those of division electricians, master mechanics and foremen in charge of individual operations.

"No increase in rates is being made in the manufacturing departments."

There are more than 27,500 men employed in the coal mining industry of the state and the wage increase will affect the greater portion of these men.

To Build Additional Elevator Unit of 200,000 Bushels Capacity.

Dallas, Tex.—An additional unit with a capacity of 200,000 bushels of grain is being added to the elevator of the Pearlstone Mill and Elevator Company here. When the new unit is finished the storage capacity of the plant will be 500,000 bushels. This addition will consist of six reinforced concrete tanks; construction has been started by the Jones-Hettelstater Construction Company of Kansas City, Mo. Officers of the Company are Julius H. Pearlstone, president; Hyman Pearlstone, vice president; Tucker Royall, vice president; C. J. Wheeler, secretary, and A. A. Hart, treasurer.

New \$600,000 Building Under Contract for Johns Hopkins University.

Contract for the erection of a new building, which will form a part of the main quadrangle of buildings of Johns Hopkins University at Homewood, Baltimore, has been awarded to the Consolidated Engineering Company, a local contractor. Plans and specifications for the structure, which will be used as a chemical laboratory, were prepared by Carrere & Hastings of New York. Work will begin promptly.

The building will be U shaped, the main portion to have dimensions of 147 by 158 feet, three stories, of colonial design and of brick construction with tile roof.

Activity in Southern Building and Industry as Shown by Items in Construction Department of Manufacturers Record.

Construction activity in the Southern states for February shows an increase over January, as indicated by the number of items reported in the construction columns of the MANUFACTURERS RECORD for the month. The total was 4138 as compared with 3740 for January, and 4359 for February, 1922. Although this shows a decline from the total of last February, the industrial development items represent a marked increase, 2108 having been reported last month, as against 1887 for the corresponding month last year.

Construction items on bridges, culverts, viaducts, etc., during February, reached a total of 213, as compared with 117

for the corresponding last year. The total for January and February of this year was 414 as against 228 for the corresponding months last year. Reports covering the construction of roads and streets totaled 589 for February, compared with 500 for January and 415 for February of last year. The total for January and February of this year was 1149, compared with 739 for the corresponding period last year. Increases are shown also in other classifications.

The number of building items reported in February amounted to 1070, and 867 in January, good increases being noted in a number of classifications. The total for February, 1922, was 1185. A total of 247 dwelling items was reported in February, 1923, as compared with 234 for January of this year and 203 for February of last year, the total for January and February being 481, as against 387 for the corresponding months last year. Reports on school items reached a total of 175 in February, compared with 129 for January, while other classifications, such as bank and office buildings, hotels and other structures show increases.

Financial items show an increase for February as compared with January, the figures being 385 and 279, respectively. Items covering machinery, proposals and supplies wanted, totaled 575 for February, as compared with 532 for January.

	Totals for Feb.	Totals for Jan.-Feb.
Industrial Developments:		
Airplanes, Stations, etc.	0	1
Bridges, Culverts, Viaducts, etc.	213	414
Canning Plants	21	42
Clayworking Plants	10	17
Coal Mines and Coke Ovens	30	85
Concrete and Cement Plants	6	20
Cotton Compresses and Gins	9	16
Cottonseed Oil Mills	2	6
Drainage Systems	2	15
Electric Light and Power Plants	63	119
Fertilizer Plants	3	11
Flour, Feed and Meal Mills	14	40
Foundry and Machine Plants	29	56
Gas and Oil Developments	76	159
Ice and Cold Storage Plants	40	79
Iron and Steel Plants	2	3
Irrigation Systems	3	5
Land Developments	148	263
Lumber Manufacturing	61	124
Metal-Working Plants	26	53
Mining	20	39
Miscellaneous Construction	32	67
Miscellaneous Enterprises	171	351
Miscellaneous Factories	177	345
Motor Cars, Garages, Tires, etc.	103	209
Railways	3	5
Railway Shops, Terminals, Roundhouses, etc.	3	5
Road and Street Construction	589	1,149
Sewer Construction	63	111
Shipbuilding Plants	1	6
Street Railways	0	0
Telephone Systems	12	25
Textile Mills	59	106
Water-Works	75	131
Woodworking Plants	42	93
	2,108	4,170
Building:		
Apartment Houses	56	102
Association and Fraternal	31	58
Bank and Office	77	132
Churches	121	205
City and County	26	61
Courthouses	11	19
Dwellings	247	481
Government and State	6	10
Hospitals, Sanitariums, etc.	36	66
Hotels	59	101
Miscellaneous	31	52
Railway Stations, Sheds, etc.	15	25
Schools	175	304
Stores	141	251
Theaters	10	07
Warehouses	28	53
	1,070	1,937
Financial:		
Corporations	104	177
New Securities	281	487
	385	666
Machinery, Proposals and Supplies Wanted		
	575	1,107
TOTALS	4,138	7,878
Fire Damage	154	316
	4,292	8,194

Sales of Southern Public Improvement Bonds Over \$41,000,000 for First Two Months of 1923.

For the months of January and February Southern improvement bonds were sold for a total of something over \$41,000,000. This compares with about \$46,000,000 for the last two months of 1922.

Sales for February as reported in the financial news columns of the MANUFACTURERS RECORD numbered 91, covering the construction of roads, bridges, viaducts, schools, sewers and miscellaneous work of various kinds and representing a par value of \$20,831,800. This compares with a total of 61 for January, showing a par value of \$20,201,566. While the aggregate par value of January's sales was slightly more than for February, the latter point to a larger number of communities to be benefited by the bonds, and indicate more diversity in the nature of the improvements for which they were sold.

In February, bonds were sold for the construction of roads, bridges, viaducts, etc. to a total of \$10,965,750, as

compared with \$2,996,000 for January, while for miscellaneous construction, the February sales amounted to \$4,893,316, as compared with \$15,304,300 for January. The par value of school bonds for February reached \$1,799,000, as compared with \$2,026,500 for January, and for sewers \$2,543,500, as compared with \$505,000 for January.

In the number of sales, Texas leads the other states with a total of 14 in February and 16 in January, the aggregate par value of the February issue amounting to \$2,986,894 and for January to \$5,285,000. In the value of the bonds sold, West Virginia is the leading state in February, with a total of \$5,290,000, Texas ranking second, while North Carolina leads in January with \$10,272,000, Texas again ranking second.

A summary of bonds issued for January and February is published herewith.

SUMMARY OF BOND ISSUES, BY NUMBER, BY CLASSIFICATION AND BY STATES.
JANUARY.

	Roads.	Schools.	Sewers.	Miscellaneous.	Total Issues.	Total Value.
Alabama	1	1	1	1	4	\$95,000
Arkansas	1	1	1	1	4	100,000
Florida	1	1	1	1	4	355,000
Georgia	1	1	1	1	4	157,000
Kentucky	2	1	1	1	5	502,000
Louisiana	1	1	1	1	4	125,000
Maryland	1	1	1	1	4	600,000
Mississippi	2	4	1	2	9	630,000
Missouri	1	3	1	2	7	1,030,000
North Carolina	1	2	1	3	7	10,272,000
Oklahoma	1	1	1	1	4	241,800
South Carolina	2	1	1	1	5	323,000
Tennessee	1	1	1	1	4	500,000
Texas	5	1	3	7	16	5,285,000
Virginia	1	1	1	1	4	408,000
West Virginia	1	1	1	1	4	150,000
	16	17	6	22	61	\$20,201,566

SUMMARY OF BOND ISSUES, BY NUMBER, BY CLASSIFICATION AND BY STATES.
FEBRUARY.

	Roads.	Schools.	Sewers.	Miscellaneous.	Total Issues.	Total Value.
Alabama	3	1	1	1	6	\$200,250
Arkansas	1	1	1	1	4	100,000
Florida	3	1	1	2	7	808,922
Georgia	1	1	1	1	4	95,500
Kentucky	1	1	1	2	5	1,069,000
Louisiana	1	1	1	1	4	520,000
Maryland	1	2	1	3	7	2,514,000
Mississippi	4	1	1	1	7	1,130,000
Missouri	1	4	3	1	9	822,000
North Carolina	1	3	2	6	11	1,765,000
Oklahoma	1	2	1	1	5	320,000
South Carolina	2	1	1	1	5	225,000
Tennessee	1	1	1	1	4	510,000
Texas	6	1	4	3	14	2,986,894
Virginia	5	3	1	3	12	1,845,000
West Virginia	2	1	1	1	5	5,290,000
	31	22	15	23	91	\$20,201,566

Steel Contract Awarded for Big Sugar Refinery.

Texas City, Tex.—Contract for all the structural steel required for the sugar refinery to be erected here by the Texas Sugar Refining Company, of which Col. H. B. Moore of Texas City is vice president, has been awarded to the Ingalls Iron Works Company of Birmingham, Ala. This involves the boiler house, engine room, machine shop, pan house, packing house, filter house, office building, wash plant, refined sugar warehouse, raw sugar warehouse and cooperage plant.

Construction is to start immediately and shipments of steel will begin to go forward in 30 days. The first unit of the plant will have a refining capacity of 1,000,000 pounds per day, the building to be of steel, concrete and brick, 8 stories, with its own dock and wharfage facilities. It is thought that this unit will be completed by October and all machinery installed and the plant ready for operation by the first of next January. While the unit capacity will be but 1,000,000 pounds of sugar per day, the plant will be

built on a scale to permit the ultimate enlargement to 2,500,000 pounds daily.

The Texas Sugar Refining Company is capitalized at \$5,500,000. E. P. Eastwick, Jr. of New York is the engineer in charge of the construction of the plant and is the designer of all buildings, machinery and other facilities.

Will Erect Additions to Cost \$500,000.

St. Louis, Mo.—The McKelvey Construction Co. of this city has been awarded a contract by the Missouri State Life Insurance Co., to erect an addition of 5 to 8 stories to its building here which is at present 4 and 7 stories, making the structure 12 stories when completed. The addition will be of fireproof construction, steel, brick and terra-cotta, with concrete and tile floors and composition roof, and will cost \$450,000 to \$500,000. Metal doors, vaults, and mail chutes will be installed and steel sash and trim used in part.

A. B. Groves is the architect, and A. A. Aegerter is the engineer, both of St. Louis.

Hendersonville Seeking Industries—Large Amount of New Building Now Going On.

Hendersonville, N. C., February 26—[Special.]—"We want a factory!" This terse statement unequivocally places this town on record as favoring industrial development. And these are not idle words, thoughtlessly spoken. The people here mean business and industries they will have. Even now they are at work encouraging the location in the vicinity of several textile mills, and they are going after other companies.

The Chamber of Commerce, of which F. S. Wetmur, is president, and A. M. McWhirter, secretary, is directing the campaign, which has the support of all the civic organizations, leading business men, banks and those industries now operating here.

A building program of unusual volume is under way. Business houses, garages, residence and similar structures are being erected in large numbers. One of the largest buildings under construction is the new home of the First Bank & Trust Company, which when completed will have entailed an expenditure of \$175,000. It will be ready for occupancy in about three months. The first floor will be occupied by the bank and by the Southern Bell Telephone Company. On the floors above will be 37 offices. The structure is four stories high, 46 by 130 feet. The King Lumber Company, of Charlottesville, Va., has the general contract after plans by Erle G. Stilwell of this place.

Industries in the town and in Henderson county are humming with activity. They are working at capacity with full forces engaged. These include the Skyland Hosiery Company, at East Flat Rock; the Balfour Quarries; the Whitlock Silk Mills; the Tuxedo Mills at Green River; the Freeze-Bacon Hosiery Mills; and the Grey Hosiery Mills.

A school building program is being worked out. Erle G. Stilwell, of Hendersonville, will be the architect. A centrally located high school to serve the entire county will be a feature.

The city has just completed a big paving program. The county has a comprehensive road and bridge building plan, which in addition to providing main thoroughfares will include lateral connections in all directions. Three major projects include the highway from Hendersonville to the Buncombe county line, that to the Greenville (S. C.) county line, and the road to Bat Cave and the Chimney Rock section.

One of the largest projects now under way is the construction of water works at a cost of \$600,000, which will insure a supply sufficient for domestic and industrial consumption of a city of 50,000 people. The Kelly & Wilson Company, Asheville, have the general contract, with Gilbert C. White, Durham, as engineer. The Virginia Machinery & Well Co., Inc., Richmond, are also engaged. Work was begun last July and the project will be completed in mid-summer. Water from the Pisgah Government reservation will be brought to the town, being impounded by a concrete dam 180 feet long, 28 feet maximum height, to have a water depth of 18 feet. A distributing reservoir of 5,000,000 gallons has been completed. In its construction 13,000 cubic yards of excavation were required. Work of laying the necessary pipe lines is being pushed.

Extensive improvements to the water system of the town are also contemplated for the near future to care for the rapid growth, especially the residential development in new sections.

Fred. Toms is undertaking a development at Lake Osceola, which calls for the construction of a reinforced concrete dam, 377 feet long, with a spillway 95 feet long. The land adjoining will be prepared for residential development, and roads, streets and sidewalks will be laid out.

"Business is in fair condition here," states R. C. Clarke, president of the First Bank & Trust Company. "The mer-

chants report sales high, and the industries are all busy."

C. E. Brooks, vice-president of the Citizens National Bank, states: "Conditions here are very good. Deposits are very good, and there is an improvement in all lines."

Agricultural progress is being fostered by a county-wide campaign in the interest of diversification. Production of crops for which a ready market may be found in the nearby towns is being encouraged, as is the planting of orchards on a big scale.

C. E. W.

To Grow Cotton in the Mountain Regions of Texas.

Tahoka, Texas, March 3.—[Special.]—In a group of twelve counties situated in the South Plains region of West Texas and having New Mexico for their western border the acreage to be planted in cotton this season will be more than double what it was last year. Many thousands of acres of raw ranch lands have already been broken for the first time and are being prepared for planting. More than twenty new cotton gins are to be built in this group of counties in time to handle the coming season's crop, it is stated.

This comparatively new cotton growing area has an altitude of three thousand feet and up to this time there has never been seen here a cotton boll weevil. It is believed by experts that the altitude and more or less severe winter climate, together with the absence of all brush, makes it impossible for the weevil to exist here. It is pointed out that the pest has spread to the East and North and to all other places where cotton is grown and that it would certainly have appeared in the South Plains region long before this if it were possible for it to live and propagate here. The exemption of the altitudinous plains from the boll weevil pest, the easy method of cultivating the land and the large average production of the staple is attracting widespread attention on the part of cotton growers of other parts of the state, and the development of the industry which is now going on is largely due to the influx of these farmers.

The cotton-growing movement in the South Plains region is not stopping at the New Mexico line but is being rapidly extended into the eastern part of that state. Last season seed-cotton was hauled as far as thirty miles to the nearest gin. This handicap is to be removed by the building of gins at many new points in the cotton growing territory, it is stated.

Large Increase in Commodity Production as Compared With Former Years.

A very large increase in productive activity is indicated by figures of the Bureau of the Census on January business conditions, with new high records made in many cases.

Cotton goods, pig iron, steel ingots, locomotives, zinc, bituminous coal, and flooring are among the basic commodities whose January production figures show the largest output since the boom period of 1920. Sales and unfilled orders show the same upward trend, especially in metals and building materials. The large car loadings and seasonally high retail sales, as well as the general depletion of manufacturers' stocks, indicate that the goods produced are quickly passing into consumption.

Wholesale prices as a whole showed no change in January but farm products declined, while other groups rose. The present increase in productivity has thus far been differentiated from the 1919 boom by the relatively small expansion of commercial credit and the relatively gradual increase in prices. The price increase during 1922 amounted to less than half of the increase in wholesale prices during 1919.

Cotton consumption by textile mills in January was the third largest in our history, totaling 610,375 bales.

Wool receipts at Boston were very heavy in January, with foreign wool receipts the highest since April, 1921. Silk

consumption increased to 34,680 bales, while stocks declined from the December high mark.

Pig-iron production, at 3,229,604 tons, was the largest since October, 1920, while steel-ingot production, at 3,717,071 tons in January has not been exceeded since March, 1920. Unfilled orders of the United States Steel Corporation increased, after two months of decline, and made a high record since February, 1921, at 6,910,776 tons.

Shipments of locomotives from factories were the largest since January, 1921, and unfilled orders were the highest on record at 1788 locomotives.

Production of zinc rose to 92,634,000 pounds, the highest since March, 1920, while stocks declined to 33,148,000 pounds, the lowest since the armistice.

Production of bituminous coal in January amounted to 50,123,000 tons, the highest month, with one exception, since December, 1920.

Lumber figures for January, as far as available, indicate a considerable increase in production and shipments over both the previous month and the corresponding month last year. Production of maple flooring reached the highest point on record, and oak-flooring production for January has been exceeded only once.

Oil Refinery Figures Show Large Gasoline Increase For 1922.

According to figures compiled by the United States Geological Survey the indicated domestic consumption of crude oil in the United States during 1922 was 586,359,000 barrels of 42 gallons. Of this amount 500,706,000 barrels of crude oil (both foreign and domestic) was run to refinery stills; thus 85% of the indicated consumption of crude oil was refined, most of the remainder being used as fuel without refining. Refineries operating during the year had an aggregate capacity 12% greater than the total consumption of crude oil. This does not take into consideration the numerous inoperative refineries.

The December production of gasoline was the largest month's output recorded, amounting to 585,049,677 gallons and exceeding the previous record of last July by over 15,000,000 gallons. This brought the total for the year to 6,202,234,613 gallons, an increase of 20% over the 1921 output.

The present stocks of gasoline, 883,792,861 gallons, lack only about 9,000,000 gallons of the peak stocks of last May 1, with probably four months yet of increasing stocks before reaching the peak in 1923. Based on the present rate of consumption these stocks represent 64 days' supply. Following out the present trend of gasoline stocks with expectation of the customary increase during the early months of the year, the stocks may be expected to increase between 300,000,000 and 350,000,000 gallons by May 1, thus probably totalling about 1,200,000,000 gallons. This increase in stocks may, of course, be decreased by a falling off in refinery operations the early part of this year.

The indicated domestic consumption of gasoline during the past year amounted to 5,366,423,822 gallons, an increase of only 200,000,000 gallons as compared with the preceding year and an increase of over 1,000,000,000 gallons in production during 1922 over 1921. Domestic consumption amounted to 86.52% of domestic production.

The production of kerosene for the year was 2,306,326,489 gallons, an increase over 1921 of about 360,000,000 gallons, but slightly below the figures for 1919 and 1920.

Gas and fuel oil output for the year hit a high mark in the industry, amounting to 10,706,226,570 gallons, an increase of about 1,000,000,000 gallons or 11% over the production during the preceding year. Stocks on hand at the end of the year were 1,304,727,850 gallons as compared with 1,331,265,439 gallons the first of the year.

The production of lubricating oils in 1922 was 978,752,469 gallons. This output was exceeded only in 1920 when it was 68,000,000 gallons greater.

OUTPUT OF REFINERIES BY SECTIONS FOR 1922.

	Run to the Stills		Gasoline (gal.)	Kerosene (gal.)
	Crude Oil (bbl.)	Crude Oil (bbl.)		
East Coast ...	100,524,654	10,320,410	1,161,493,123	555,247,665
Penna.	20,660,845	1,485,465	298,207,142	142,790,834
Ind. and Ill. ...	45,606,046	4,061,851	588,537,636	198,407,285
Okla. and Kan. ...	70,834,293	6,265,577	1,107,164,803	331,706,142
Texas	100,696,083	7,063,261	1,057,904,183	500,402,885
La. and Ark. ...	34,864,586	1,878,471	365,829,696	211,397,748
Cal. and Wyo. ...	24,390,940	14,621,442	569,510,192	111,081,891
California	103,028,169	8,901,774	693,497,748	196,292,029
Total 1922	500,705,616	54,598,251	6,202,234,613	2,306,326,489
Total 1921	443,362,657	36,492,565	5,153,549,318	1,945,126,156
Total 1920	433,915,029	40,234,591	4,882,546,649	2,320,065,443
Total 1919	361,520,153	45,762,616	3,957,857,097	2,341,632,164
Total 1918	326,024,630	50,565,204	3,570,312,963	1,825,360,137
Total 1917	315,131,681	14,897,670	2,850,546,423	1,726,768,976

\$250,000 Calcium Arsenate Plant at Monroe, La.

Monroe, La.—A \$250,000 calcium arsenate plant will be established and operated here by the Boll Weevil Insecticide Company of Paragould, Ark., Dr. J. G. Birchett, president. The company has purchased the plant of the Monroe Cotton Oil Company and Francis E. Goodwin, secretary and treasurer of the new enterprise is in Monroe superintending remodeling operations.

It is felt that advantages derived from cheap gas fuel and good transportation facilities will make sure more even distribution of the product throughout the South and will insure a more effective fight against the boll weevil. It is stated that when the plant has been put in condition and actual operations have begun, the main offices of the company will be moved to Monroe.

The plant will employ about 60 men and will operate day and night with an estimated output of seven tons of arsenate every twenty-four hours. It is expected that the entire production will be distributed among the districts where infestation is the greatest.

\$15,000,000 Fordson Coal Company to Operate all Ford Coal Interests.

The Fordson Coal Company, Incorporated, with a capital stock of \$15,000,000, plans to centralize the management of coal properties in West Virginia and Kentucky lately acquired by the Ford Motor Company of Detroit, as stated in recent press reports. The West Virginia properties are in Fayette and McDowell counties while the Kentucky lands comprise 28,000 acres in Pike County and another property near the Virginia-Tennessee line. Responding to a request for information, the Ford Motor Company writes the MANUFACTURERS RECORD:

"Would advise that the Fordson Coal Company is being organized to operate all the coal interests of this company. We are not now in a position to give you any further details of the plans in connection with this company."

\$300,000 Plant to Manufacture Carbon Black.

Austin, Tex.—J. W. Hassell of Austin, former chief of the oil and gas division of the Railroad Commission, and associates have been granted a permit by that body to manufacture carbon black from residue natural gas from casinghead gasoline plants in Stephens County. The permit is for a period of five years. Judge Hassell said that the plant will cost \$300,000. It will burn between nine million and twelve million cubic feet of waste gas a day and will be the largest plant of its kind, he stated. It takes 1000 cubic feet of gas to make one pound of carbon black.

British Cotton Goods Shipments for January.

Manchester, February 13.—[Special.]—During January cotton yarns and manufactures valued at £16,579,201, or 31 per cent of the total of manufactured articles, were exported from the United Kingdom. £13,204,782 was the value of 399,988,200 square yards of piece goods, and yarns weighing 12,814,700 pounds accounted for £1,793,504. For January, 1922 the figures were cotton yarns and manufactures £16,-813,416, and total of manufactures £51,824,083. The average price of the piece goods in January 1923 was 7.92d. per square yard, and of the yarn 33.59d per pound.

So far as quantities are concerned the shipments of yarn for January, with the exception of December 1922, were less than for any of the preceding eighteen months. In January 1922 the exports amounted to 14,806,200 pounds, and the decrease in January this year compared with last is due to the smaller takings of buyers in India and China, the amounts of the deficiency being: Bombay, 1,975,000 pounds; China, 1,055,000 pounds; Bengal, etc., 464,000 pounds, and Madras, 279,000 pounds. German customers, however, increased their consumption by 1,263,000 pounds and the United States of America also took 279,000 pounds more.

The yardage of piece goods at 399,988,200 was the highest since June 1920, apart from July 1922, when the figure was 443,609,800 square yards. Compared with the January 1922 amount of 339,117,400 square yards, shipments have been made on a freer scale to the following outlets, the increase being shown in thousands of square yards: Bengal, etc., 55,733; Bombay, 19,936; Madras, 4083; Argentine Republic, 2728; Chile, 2665; United States of America, 2209; Colombia, 2028; Canada, 1993; Sweden, 1926; Roumania, 1852. Decreases are recorded for the following: China, 17,756; Dutch East Indies, 8823; Egypt, 6151; Iraq, 5224; British South Africa, 2278; Turkey, 2270; Japan, 2002.

Annual Meeting of Southern Metal Trades.

The annual convention of the Southern Metal Trades Association was held recently at Memphis, Tennessee, where addresses were delivered by Whiteford R. Cole, president of the Nashville, Chattanooga and St. Louis Railway on "The Railroad Situation," and by Dr. G. W. Dyer of Vanderbilt University on "Government and Business."

Papers were read by J. M. Hollowell on "Leaks and Kinks in the foundry," by H. W. Anderson on "Metallurgy of Cast Iron," and by Mr. Terry of the Lufkin Foundry & Machine Company, Lufkin, Texas, on "Foundry Costs." Adolph Boldt, St. Louis, District Secretary of the United States Chamber of Commerce delivered the address at the banquet on the subject, "Cooperative Voice of American Business." John M. Dean of the Memphis Chamber of Commerce also spoke.

For the ensuing year the following officers and administrative councillors were elected:

President: Mr. J. R. Hedges of Casey-Hedges Company, Chattanooga, Tenn.
1st Vice-President: Mr. E. F. Billington of Soule Steam Feed Works, Meridian, Miss.
Treasurer: Mr. J. M. Hollowell, of Spalding Foundry Company, Atlanta, Ga.
Secretary: Mr. W. E. Dunn, Jr., Atlanta, Ga.
Vice-President—North Carolina: Mr. W. S. Pfohl of Briggs Shaffner Company, Winston-Salem, N. C.
South Carolina: Mr. T. H. Siddall, Sumter Machinery Company, Sumter, S. C.
Georgia: Mr. Jno. S. Schofield, Schofield Iron Works, Macon, Ga.
Florida: Mr. R. O. Collins, Tallahassee Iron Works, Tallahassee, Fla.
Alabama: Mr. E. W. McDonald, Talladega Foundry & Machinery Co., Talladega, Ala.
Mississippi: Mr. J. A. Mosal, Mississippi Foundry & Machine Co., Jackson, Miss.
Tennessee: Mr. T. L. LaMalta, Chickasaw Machine & Foundry Co., Memphis, Tenn.
Arkansas: Mr. F. I. Brown, Arkansas Foundry Company, Little Rock, Ark.
Louisiana: Mr. Chas. R. Law, DeSoto Foundry & Machine Co., Mansfield, La.
Texas: Mr. W. C. Trout, Lufkin Foundry & Machine Co., Lufkin, Texas.
Virginia: Mr. W. E. Thomas, Union Foundry Company, Danville, Va.

Two \$1,000,000 Elevators for Fort Worth.

Fort Worth, Tex.—It is stated by G. M. Blewett, head of the Blewett Grain Company of Fort Worth, that plans are on foot to build two new elevators here. Each will have a capacity of 1,000,000 bushels and are to be constructed by two grain exporting companies. The present grain storage capacity of the city is 4,500,000 bushels, which was hardly adequate to handle the business of the grain industry here last year.

The large increase in grain receipts is responsible for the interest in the building of the new elevators, according to a report made to the grain exchange by Mr. Blewett. During 1922 Fort Worth received 15,254 cars of grain, as against 10,550 cars in 1921. According to Mr. Blewett this is the largest increase in business reported by any one city in 1922, and most of the cities reported losses of business in 1922 over 1921. The present grain demand is small in Texas, but is much larger than that in other sections of the country.

Contract for \$400,000 Building in Chattanooga.

Chattanooga, Tenn.—Contract has been awarded to John Park & Co. of this city by the Provident Life and Accident Insurance Company for the erection of its proposed building here which will involve the construction of a 1-story wing addition to the present 2-story office structure and the addition of another 2-story wing, both 33 feet wide, together with the erection of a 12-story section between the two, 58 feet wide. The cost of the improvements will be about \$400,000.

The building will be fireproof, the first three stories to be faced with terra-cotta and the remainder of vitreous gray brick. The frame will be of reinforced concrete and steel. It will be of the tower type, the ground floor having dimensions of 120 by 95 feet. The tower will begin at the fourth floor. Terra-cotta will be used for the cornice and trim, marble for floors and wainscoting in the corridors and hardwood for the interior finish. It will have a green tile roof.

R. H. Hunt of Chattanooga is the architect.

Miami Studios Producing Motion Pictures.

Miami, Fla.—The local plant of the Miami Studios, Inc. is now turning out finished motion pictures. It is the first plant of this kind in the South and was built by John Brunton of Los Angeles, who is understood to have selected this point because of certain well-recognized advantages of scenery and climate in Florida and the comparatively close distance of the state to New York.

The recently completed buildings of the Miami Studios include the big main building, powerhouse, mill shop, and restaurant, each of these structures being of stucco construction of Spanish design, two stories high. Modern equipment is used throughout, including elaborate sets, stages 60x30 feet, Cooper-Hewitt lights, a complete laboratory, wind-machines, portable generators on trucks, etc.

Large producers are using the studios, several pictures already having been made. D. W. Griffith and a company of eighty-seven are busy here now.

Will Use Electricity for Bauxite Ore Mining.

Pine Bluff, Ark.—The American Bauxite Company, operating bauxite mines in Arkansas, which produce a large proportion of the aluminum ore of the world, has completed arrangements with the Arkansas Light & Power Company for electrical service to operate about 300 motors and to illuminate Bauxite, a town of 4000 inhabitants.

It is estimated that 2000 horse power of electrical energy will be required for mining, crushing and calcining the bauxite ore which is then shipped to East St. Louis where the aluminum is extracted. The plant has heretofore been operated with gas engines using natural gas for fuel.

THE IRON AND STEEL SITUATION

Fundamental Conditions Are Unchanged in the Steel Market—Demand Continues—Production High.

Pittsburgh, March 3.—[Special.]—The week has brought no novel developments, there being simply a continuance of previous trends. There have been some further price advances, the rate of production has increased somewhat more, and the buying movement in Connellsville coke already inaugurated has proceeded apace.

The fundamental conditions remain as formerly. Steel buyers have very heavy requirements, for making machinery, tools, implements, etc., for building cars and locomotives and for erecting various structures. This is not new, as the requirements have been growing for approximately a year. Increase in steel demand began much more than a year ago, but the early increase was due chiefly to completion of liquidation of stocks, held over from 1920. That, by the way, shows that the actual ultimate consumption of steel and manufactures of steel in 1920 was not equal to the production in that year. The recollection of 1920 is of everything being very scarce, but the recollection is based chiefly upon the fancy prices ruling for much of the year, whereas the high prices were due in some cases to profiteering and in other cases to material being poorly distributed, some having more than enough and others being forced to pay large delivery premiums.

Production of steel now is at a rate fully equal to the highest rate attained in 1920, while production in the past five months has exceeded the average rate in 1920. Assuming that all the steel has gone or will go into actual ultimate consumption, the situation is that there is more industrial activity in the lines consuming steel than there was in 1920. Not as much money is changing hands but a larger quantity of actual business is being done.

The turnover in the steel market is not as great as in December or January, because a large volume of business has already been put on books. Mills are sold as far ahead as they care to be sold, and buyers, with some exceptions perhaps, are well covered for their actual requirements, though in many cases not as far ahead as they would like. There is a large volume of inquiry in the market, but much of it is what the mills call "speculative" and refuse to quote upon. Many mills are refusing more business than they are accepting.

The American Sheet & Tin Plate Company (Steel Corporation) has advanced its prices as follows: Tin plate, 100-pound cokes, \$4.75 to \$4.95; blue annealed sheets, 2.50c to 2.65c; black sheets, 3.35c to 3.50c; galvanized sheets, 4.35c to 4.60c; automobile sheets, 4.70c to 5.00c. Some independents had previously advanced their prices by somewhat larger amounts, others being simply out of the market. The Steel Corporation was already sold up practically full through June but advanced prices at this time to discourage customers from seeking to place additional tonnages, which would have had to go over into third quarter. Independent sheet mills, as a rule, have been selling only for April, even at their advances, the independent market being 2.75c to 2.90c for blue annealed, 3.00c for black, 4.75c for galvanized and 5.35c for automobile sheets. Independent tin plate mills are very reserved about selling. Sales in the open market are generally at \$5.00 to \$5.25.

The opinion is growing that with the latest advances in finished steel prices the advance is about over, as to basis prices, for extended or late delivery. There may be a development of substantial premiums for early deliveries. There is a little premium business going now, but only in small tonnages.

The buying movement in Connellsville furnace coke for

second quarter delivery, reported two weeks ago with contracts totalling 29,000 tons a month closed, has been heavy since then, the total of business closed being over 200,000 tons a month, all at \$7.00 with the exception of a single contract totalling 29,000 tons a month closed, has been heavy than consumers had expected to pay and is made by the heavy consumptive prospects. Some of the coke has been bought by consumers ordinarily self-contained, but now faced with maximum operation of blast furnaces, and some has been by stacks idle for a long time and about to blow in.

Pig iron continues to show a stiffening tendency in all districts due partly to requirements increasing, partly to coke costing more money than had been expected and partly to buyers having held off so long that furnaces now plainly have the upper hand. In the valley market basic and foundry easily maintain their advance of \$1 reported a week ago, while Bessemer has advanced 50 cents in the week, the market now being at \$28.50 for Bessemer, \$27 for basic and \$28 for foundry and malleable, f. o. b. valley furnaces, freight to Pittsburgh being \$1.77.

Tendency Toward Higher Prices for Pig Iron—Some Withdrawals from Market—Steel Mills Busy—Coal Production Heavy.

Birmingham, Ala., March 5.—[Special.]—Pig iron manufacturers in the Birmingham district are finding no difficulty in selling their product. Conservative interests are holding to the \$25 per ton price, No. 2 foundry, while two of the smaller companies have sold a little iron at \$26 for third quarter delivery and are practically withdrawing from the market because of its unsettled condition, all tendency being for a better price. Sales recently were in the main for second quarter delivery and the probable make for that period will shortly be exhausted. But little tonnage has been sold as yet for the third quarter but there are positive indications that the market is going to be as firm during that period as heretofore this year with probabilities of an increased price for the product. Every attention is given to production and delivery.

The melt in the home territory continues steady with an increasing tendency. Every iron melting industry in the district and in the territory supplied by Birmingham iron producers is going at practically 100 per cent. One of the larger and more active furnace companies out of the market for the past 10 days announces that there is a little apprehension that the books might become overloaded, and until some of the business can be cut down no further effort will be made towards taking on more.

Consensus of opinion among furnace interests of the district now is that the iron market will be active through the balance of the year and into 1924. Industries which melt large quantities of iron express the opinion that there is already enough business in sight to warrant steady operation through the year with prospects of the needs not all being met. One of the smaller furnace interests with one furnace in operation, has sold two months of its probable make of the third quarter. Another is out of the market for an indefinite period. One of the larger concerns announces that business at \$25 per ton, No. 2 foundry, is to be received and intimation is that there is plenty of iron yet to be disposed of. The Steel Corporation has 11 blast furnaces in operation, basic iron at all but three. Another furnace is under repairs with the corporation.

The recent visit of the president and other officials of the Sloss-Sheffield Steel & Iron Company to Sheffield and Florence where the two blast furnaces in operation were inspected

and then a look-over given to properties of the Sheffield Iron Corporation, consisting of three blast furnaces and some ore lands at Russellville, 20 miles away, has brought about gossip as to probable results. The Sheffield concern has been in the hands of receivers for the past two years. No statement is made by Sloss-Sheffield officials except that the properties were looked at.

The Ingalls Iron Works has been awarded contract for the structure of the new pipe foundry to be put in by the Central Foundry Company at Holt, Tuscaloosa county, Ala. This is property of the Iron Products Corporation and the plant is to be completed by May this year. The new building will be 364 by 140 feet with a 50x50 cupola house attached, modern in every detail, and used exclusively for the manufacture of Universal type pressure pipe in sizes from two inches up to 18 inches in diameter. The addition will give employment to 300 men. The present plant of the company is a remodeled factory, the old pipe plant having been destroyed by fire.

The steel mills of the district are operating almost to capacity with the shipment of products equal to output. The Gulf States Steel Company has readjusted the wages of common labor at its plant at Gadsden and better satisfaction is noted. Five of the six open hearth furnaces there are in operation and the entire finishing mills. The American Steel & Wire Company plant at Fairfield, is also operating to capacity. Installation of an electrical motor at the rail mills of the Tennessee Coal, Iron & Railroad Company has brought about improved conditions. Hour records were broken during the past month at the big works of the Tennessee Company at Ensley, the month's record not being possible because of the short month, 28 days. Every ton produced at steel plants is in demand.

Alabama coal production is still heavy, the car situation being the only hampering factor. Demand is strong for all the coal that can be mined. Despite the announcements that organization is being perfected by the United Mine Workers of America, no troubles are looked for in April when new contracts are supposed to be signed. Prominent coal operators state that the Birmingham district is to be considered an open-shop field so far as mining is concerned.

The coke market continues strong, recent impetus in demand being noted with a firmer price in existence. Contract sales have been made again as low as \$7 per ton, foundry coke, while spot coke sold recently in this district at \$8.50 to \$9.50. The production shows no improvement, the maximum without additional ovens being put into operation having been reached. The prospects in the coke business are as bright as in the pig iron trade, steady demand through the balance of the year.

The scrap iron and steel market is holding its own, firmly. The quotations show a little readjustment. Stocks are being kept up to splendid condition, with demand steady.

Charcoal iron is in very good demand, prices ranging between \$32.50 to \$34.00. The Shelby Iron Company has started up its furnace at Shelby and some little stock is being piled up but not too much, as the prospects are that the melters of this class of iron have many orders in hand.

Pig iron and iron and steel scrap quotations follow:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$25.00 to \$26.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$25.50 to \$26.50; iron of 2.75 to 3.25 per cent silicon, \$26.00 to \$27.00; iron of 3.25 to 3.75 per cent silicon, \$26.50 to \$27.50; iron of 3.75 to 4.25 per cent silicon, \$27.00 to \$28; charcoal iron, f. o. b. furnace, \$32.50 to \$34.00.

OLD MATERIAL.

Old steel axles.....	\$24.00 to \$25.00
Old iron axles.....	24.00 to 25.00
Old steel rails.....	22.00 to 24.00
Heavy melting steel.....	15.00 to 17.00
No. 1 R R wrought.....	20.00 to 21.00
No. 1 cast.....	23.00 to 24.00
Stove plate.....	20.00 to 20.50
Old car wheels.....	22.00 to 23.00
Old tramcar wheels.....	23.00 to 24.00
Machine shop turnings.....	12.00 to 12.50
Cast iron borings.....	12.00 to 12.50
Cast iron borings, (chem.).....	15.50 to 16.00

RAILROADS

STOCK DIVIDEND RELEASES IMPROVEMENT PLANS.

Louisville & Nashville Railroad Can Issue \$150,000,000 of New Bonds as Needed.

The action of the Interstate Commerce Commission in its approval of the issue of a stock dividend of \$45,000,000 by the Louisville & Nashville Railroad Company will allow the fulfillment of a comprehensive financial plan for the system which, according to the announcement made in July 1921 when the stockholders approved the issue, will take care of the company's financial needs for many years. The application for the issue has been held under consideration by the Interstate Commerce Commission for the last 18 months or more.

The stock dividend proposed by the company was for \$53,000,000, which would have made the total stock outstanding \$125,000,000, according to the statement made in 1921. The surplus of the company was then about \$83,000,000; it is now about \$95,000,000, so that the issue which the Commission has authorized will be nearly one half of the surplus, and it will increase the amount of the capital stock to \$117,000,000. The authorization is based upon conditions prescribed by the Commission to the effect that the Louisville & Nashville Railroad shall not dispose of its stock holdings in its several subsidiaries, such as the Nashville, Chattanooga & St. Louis Railway and others, without the consent of the Commission. It is also provided that there shall not be any capitalization of expenditures made on the property prior to October 1 last.

Under the general financial plan which was announced at the time the application was made for the approval of the stock dividend, the company may issue bonds in series for improvements, for refunding, and for other purposes. These securities, which according to a report from Louisville may amount to \$150,000,000, will be disposed of in the financial market from time to time as required, each issue having the rate of interest that would be deemed the most advantageous at the time of its flotation. This sort of financial plan resembles that adopted some time ago by the Pennsylvania Railroad and some other systems. Plans have been prepared by the company's engineers for general double tracking on busy main lines as well as for extensions where deemed necessary. Some improvements have already been made and others have been begun.

"Frisco" to Build a Connecting Link.

Austin, Texas, March 2.—[Special.]—Connecting up the International & Great Northern Railroad with the St. Louis & San Francisco Railroad system in order to give a new through all-rail route from St. Louis via Kansas City to the distant southern points reached by the former system, including the Mexican border at Laredo and the port of Galveston, will be an accomplished fact within the next twelve months, it is authoritatively stated. The survey for a connecting link to be built from Mineola to Cooper, 53 miles, is now being made by T. W. Kingsley of the engineering department of the "Frisco," who states that a trackage arrangement has been made with the Texas Midland Railroad for the use of its line between Cooper and Paris. At Paris connection will be made with the "Frisco" and at Mineola with the International & Great Northern. It is expected that the Interstate Commerce Commission will approve this.

In the application which the Frisco has submitted to the Texas Legislature for authority to consolidate with its system the International & Great Northern and other Texas

lines is included the Quanah, Acme & Pacific Railway which runs from Carnes on the Red River to Roaring Springs, Tex., 91 miles. It connects with a branch of the Frisco at Quanah. It was built by Sam Lazarus of St. Louis and owned by him up to the time of its recent sale to the Frisco, which may extend the line to Roswell, New Mexico.

President Rea Asks Pennsylvania Stockholders to Oppose Further Transportation Legislation.

President Samuel Rea of the Pennsylvania Railroad Company has sent to every stockholder along with the dividend checks mailed to them at the end of February a personal appeal, over his own signature, on behalf of the company saying:

"It is the opinion of the management of your railroad that the active influence of the stockholders of the Pennsylvania Railroad Company should be enlisted against further restrictive legislation, and in favor of a sound public policy toward railroads.

"It is essential that your management be permitted to operate your railroad on a business basis; to make both ends meet, to earn a reasonable return on your investment, and to sustain railroad credit in order that new funds may be secured for additional transportation requirements.

"Believing that the management of your railroad can produce better results with more freedom from legislative and regulatory restraints, we recommend and strongly urge each stockholder to use his or her influence to prevent the enactment of either national or state legislation, which will further complicate the railroad situation by imposing upon the railroads an increase of unnecessary expense and burdensome regulation."

Freight Loadings Exceedingly Heavy.

The car service division of the American Railway Association reports that the loading of revenue freight on the railroads continues to run the heaviest in their history for this time of the year. During the week ended February 17, there were loaded 817,778 freight cars and although this was a decrease of more than 35,500 cars as compared with the preceding week—owing to the holiday observance of Lincoln's birthday anniversary in a number of states—it was 44,500 cars more than were laden during the corresponding week of last year and over 125,700 cars in excess of the loadings during the same week of 1921. Moreover, the total was considerably above the aggregate for that week in either 1918, 1919 or 1920. During the week increases in loadings of all commodities were reported in the Southern and the Southwestern districts as compared with the previous week; other districts reported decreases.

Reports filed by the railroads show that the demand for freight cars in excess of the current supply amounted to 72,855 cars on February 14, an increase of 2333 as compared with February 8. Surplus freight cars in good repair on February 14 totaled 27,172, a decrease of 1456 for the week.

Railroad Sale Awaits Confirmation.

The Carolina & Yadkin River Railroad, which was sold in sections at auction February 19 at High Point, N. C., for a total of \$102,000, the first four and the sixth sections going to F. G. Davies, of Charleston, S. C., for a total of \$67,500, and the fifth section to George T. Penny, of High Point, for \$34,500. The sale is subject to confirmation by the court on March 12. There was no bid made for the property as a whole. It is stated that the successful bidders intend to junk the entire property, but there is much local opposition to such a disposition of it. L. H. Hole, receiver, is noted as saying that the road is worth \$150,000 and that he will endeavor to see that it brings that sum. The line is 36 miles long from High Point to High Rock, N. C.

Baltimore & Ohio Shows Progress.

The monthly statement of the Baltimore & Ohio Railroad Company covering the results of operation for January shows railway operating revenues, \$20,556,970; increase as compared with the same month of last year, \$6,287,210; railway operating expenses, \$15,618,301; increase, 3,822,376; net revenue from railway operations, \$4,938,669; increase, \$2,464,834; net railway operating income after taxes, rentals and uncollectible railway revenues, \$3,609,494; increase \$2,086,389.

February 28 was the 96th anniversary of this railroad, its charter having been granted on that date in the year 1827. Its first motive power was horses, which pulled the cars between Baltimore and Ellicott's Mills, Md., (now Ellicott City), a distance of 13 miles. This was the first publicly operated railroad in America. Locomotives were not put in use for a year or two afterwards.

How the Railroads Are Working Out—Broad Survey of Results During Last Three Years and Possibilities of 1923.

An exceedingly interesting statement of the results of railroad operations during 1922 has been prepared and issued by Dr. M. O. Lorenz, director of the bureau of statistics of the Interstate Commerce Commission. It gives a comprehensive survey of the general railroad situation in the United States and some of the most important parts of it are as follows:

"During the past three years, 1920, 1921 and 1922, the financial condition of the steam roads in the United States has materially improved. In 1920 the revenues scarcely covered expenses and taxes. In 1921, in spite of a 25 per cent drop in business done, as compared with that of 1920, the net railway operating income—which is the sum remaining out of revenues after operating expenses, taxes and certain rentals have been met and which is available for interest, rents for lease of road dividends and surplus—rose to \$616,000,000. This result was accomplished by a drastic cut in expenses, the number of persons on the payroll being reduced in 1921 about 18 per cent below the employment in 1920. In 1922 the net railway operating income, in spite of a reduction of 10 per cent in freight rates, effective July 1, 1922, was increased \$777,000,000. The revival of business more than overcame the handicaps of the strikes of the miners and shopmen.

"When it is considered that the interest, rents and similar deductions, commonly known as fixed charges, of these roads are around \$669,000,000, it will be seen that, regardless of any disputes about valuations, the roads did not earn enough in 1922, even if account be taken of the non-operating income, which before Federal control averaged about \$200,000,000 for the Class I operating steam roads. (The corresponding non-operating figure for recent years is not comparable on account of Federal control and guaranty period accounting complications.) A substantial margin above fixed charges is obviously necessary in any business.

"The marked increase in traffic in the closing months of 1922 and the probability that, as the effects of the two strikes recede, the roads will have their operating expenses under still better control, make it probable that the net railway operating income will in 1923 approach more nearly to what the Commission has indicated to be a fair return, namely, a return of 5½ per cent on a valuation of \$18,900,000,000 as of December 31, 1919, plus subsequent net additions to property. If this valuation is tentatively assumed to be 19.4 billions for the mileage used by Class I roads, the return of 5½ per cent would be \$1,116,000,000 annually. On the whole, the present railroad situation, from the standpoint of railroad finance, clearly does not, on the one hand, warrant pessimism, nor, on the other hand, at present, any radical reduction in total charges to the public. From the standpoint of the pub-

lie which is interested in adequacy of the service and in the fairness of the charges, two facts stand out prominently: (1) An enormous traffic has recently been handled in spite of the strike handicaps, and (2) the average revenue per ton per mile is pretty well in line with the general level of wholesale prices and there is no reason to believe that the general level of rates is retarding the business revival, whatever may be the adjustments which investigation may show to be desirable in the relationships between commodities or communities."

A summary and comparison of operating results during the last three years is given in the following table:

Account.	1922.	1921.	1920.
	(millions of dollars)		
Freight revenue	4,007	3,928	4,324
Passenger revenue	1,076	1,154	1,287
Railway operating revenues	5,617	5,573	6,225
Maintenance expenses	1,905	2,021	2,624
Transportation expenses	2,175	2,288	2,902
All operating expenses	4,456	4,604	5,830
Taxes	305	280	281
Net railway operating income *	777	616	58
Ratio of operating expenses to operating revenues—per cent	79.32	82.61	93.65

* Represents the result of deducting from railway operating revenues the following items: Railway operating expenses, railway tax accruals, uncollectible railway revenues and net equipment and joint facility rents.

It will be observed that a decided improvement has been brought about in the operating ratio for the railroads as a whole, the reduction from 1920 to 1922 being 14.33 per cent as shown by deducting the ratio for 1922 from the ratio for 1920, which is actually an improvement of more than 15 per cent in cutting down operating costs. This is in spite of the fact, as shown by the table, that freight revenue in 1922 was \$317,000,000 less than in 1920, and passenger revenue was \$211,000,000 less.

New Equipment Orders.

Bids have been invited and contracts will be awarded soon—probably this month—for the \$20,000,000 worth of equipment which the directors of the Louisville & Nashville Railroad Co., have ordered purchased as noted in the MANUFACTURERS RECORD last week. The purchases will include 4000 all steel hopper coal cars, 2000 composite gondola cars, 2000 ventilated box cars, 30 freight locomotives, 6 passenger locomotives, 14 standard baggage cars, 10 combination mail and baggage cars, 15 passenger cars, 15 passenger cars with smoking room, and 2 dining cars. The addition of this equipment to the rolling stock will mean that the company has purchased since the termination of Federal control of the railroads, an aggregate of 17,700 freight cars, 132 passenger service cars and 173 locomotives.

Norfolk Southern Railroad has ordered 4 Consolidation type locomotives from the Baldwin works.

Southern Pacific Railway is reported in the market for 50 locomotives, 34 of them to be heavy freight engines of the 2-10-2 type, 10 Mountain type and 6 Pacific type.

Illinois Central Railroad has ordered 50 air dump cars of 30 yards capacity from the Western Wheeled Scraper Co.

Southern Railway Co. has sold \$6,750,000 of 5 per cent equipment trust certificates secured on new equipment costing, it is stated, about \$8,444,000 and including 62 locomotives, 2200 freight cars and 3 dining cars. The system is also receiving from builders other equipment comprising 100 all steel passenger service cars which are being installed on limited through trains. This includes 40 passenger cars, 10 passenger and baggage cars, 25 baggage-express cars, 20 postal cars, and 5 mail and baggage cars. The passenger cars have screened windows and the electric lighting is of the indirect flood type. Each seats 80 passengers. The all steel cars which these will replace will be used on other through trains, taking the place of steel underframe cars, which will

in turn replace cars of wooden construction now used on light lines.

Danville Traction & Power Co., Danville, Va., has ordered 5 new double truck trolley cars.

Tampa Electric Co., Tampa, Fla., has ordered 8 new single truck trolley cars.

Pennsylvania Railroad Had Huge Traffic in January but Expenses Were Enormous.

The statement of operations on the Pennsylvania Railroad during January shows that operating revenues during the month were \$55,648,930, an increase of \$10,061,859, but there was also a large increase in railway operating expenses which totaled \$47,775,794, an increase of \$9,419,912, so that the net railway operating income, \$5,162,065, showed an increase of only \$220,196. Among the operating expenses transportation showed an increase of \$5,374,000, and maintenance of equipment an increase of \$3,246,000.

The increase of freight traffic was very large and the company notes that in the first six weeks of this year the lines of the Pennsylvania System handled enough loaded freight cars to make a solid train more than 8000 miles long. All records for volume of freight at this time of the year were broken. The number of loaded cars moved totaled about 885,000, an increase of 185,000 as compared with the first six weeks of last year.

Deal for Two Street Railways.

A report from Pine Bluff, Ark., says that announcement has been made of the purchase by the Arkansas Light & Power Co., of the electric street railway systems in Jackson and Vicksburg, Mississippi, as well as the gas system at Jackson, the aggregate amount involved being \$3,500,000. H. C. Couch is president and J. L. Longino vice president and treasurer of the purchasing company which will supply the power for the lines acquired.

Passenger Representative Appointed.

After a service of almost forty years as purser of its various steamers, John T. Riggans, purser of the Steamer "City of Baltimore" of the Chesapeake Steamship Company, has been retired from this position. Appreciating his years of service, Mr. Riggans has been appointed special passenger representative to the patrons of the company. This action is taken at Mr. Riggans' own request.

Improvements to Cost \$300,000.

The Tampa Electric Company, according to a report from Tampa, Florida, will make improvement this year at a cost of \$300,000, which will include double tracking and a completion of power lines to insure an ample supply of current under all probable conditions. T. J. Hanlon, Jr., is manager of the company.

Augusta County Will Build 8 Miles of Roads.

Staunton, Va.—Three sections of roads in Augusta County will be built by the Board of Supervisors and construction bids will be opened March 15. This will involve 4 miles of the Waynesboro-Lyndhurst road in South River District to be constructed of water-bound macadam with an alternate for bituminous macadam. Other sections are 2 miles of the Deerfield road in Pastures District, of compacted gravel macadam, and 2 miles of macadam on the Spottswood-Newport road in Riverheads district.

Alternate bids will be received on all the work, Augusta County furnishing the necessary outfit for completion. Plans and specifications may be had from the County Road Superintendent or the State Highway Commission.

GOOD ROADS AND STREETS

Missouri Lets Contracts for \$2,000,000 for 23 Sections of Roads—Total of 83 Miles.

Jefferson City, Mo.—Contracts have been let by the State Highway Department for the construction of 23 sections of roads in a number of counties in Missouri, the total mileage amounting to 83 and the cost of construction aggregating nearly \$2,000,000. The list of counties, the mileage in each, the contractors and cost of construction follow: Two sections in Caldwell County, total 79.868 miles, Highway Construction Co., Tulsa, Okla., contractor at \$456,242. In Jackson County, 4 sections of the Sni-a-bar road, totaling 18.47 miles, to W. A. Ross, of Kansas City, Mo., at a total of \$790,664; Jasper County, 4.794 miles Carterville Construction Co., Cartersville, Mo., \$26,885; Laclede County, 0.568 miles to General Construction Co., St. Louis, \$21,326; Lafayette County, 3.379 miles, Tibbetts Construction Co., Independence, Mo., at \$36,037; 4 sections in Lawrence County, totaling 17.783 miles, Carterville Construction Co., at \$126,375.

Contract was awarded for 3.707 miles in Phelps County to M. E. Gillioz, of Monett, Mo., at \$24,882; for 2 sections in Pulaski County, totaling 5.819 miles, to Sam T. Rollins, Waynesville, Mo., at \$19,709, and for 1 section in the same county, to the Koss Construction Co., Des Moines, Iowa, at \$68,723; for 2 sections in St. Louis County, totaling 6.737 miles, Ernest Berns Co., Indianapolis, Ind., was contractor at \$316,623.

For 3 sections in Taney County, 3.833 miles, 3.238 miles and 3.087 miles, contracts were awarded to J. E. Hartley, Mount Vernon, Mo., at \$16,749, Cox & Chaney, Branson, Mo., at \$19,686, and to E. A. Luck, Black, Ark., at \$19,043, respectively. Contract for 0.920 miles in Scott County was awarded to G. E. Stoner, of Charleston, Mo., at \$45,788.

Contracts for 47 Miles of Road and Two Bridges in Alabama.

Montgomery, Ala.—Contracts for the construction of more than 47 miles of road and two bridges in three counties of the State by the Alabama State Highway Commission at an aggregate cost of \$450,420 are announced.

The largest of these projects is in Bibb County, contract being awarded to G. C. Goodrich of Albany, Ala., at \$200,215 to grade, drain and surface with chert 20.164 miles of road between Centerville and Woodstock. Contract for the construction of a bridge in connection with this road was awarded to E. L. Batson of Birmingham at \$41,690. For the construction of 20.04 miles of sand clay road in Crenshaw County, contract was awarded to the Stanley & Singer Company of Lafayette, Ala., at \$114,420, and for the construction of a bridge on the same road, the same firm received the contract at \$41,395.

The Dale County Commissioners were awarded the contract at \$52,700 for the construction of 7 miles of sand clay road in that county.

North Carolina to Let Contracts for 163 Miles of Roads and Several Bridges.

Raleigh, N. C.—The North Carolina State Highway Commission plans to award contracts early in April for a number of road projects in various counties of the State, aggregating more than 163 miles. These involve the construction of road sections in the following counties: Chowan, Perquimans, Hertford, Bertie, Hyde, Craven, Wilson, Durham, Harnett, Orange, Wake, Randolph, Moore, Cabarrus, Iredell, Caldwell, Ashe, Henderson, Avery, Haywood, Madison, and Graham.

Several bridge contracts will also be awarded, including

2 bridges and approaches in Robeson County, a bridge over Horse Creek in Avery County, and bridges on the road in Mecklenburg County between Charlotte and the Cabarrus County line.

Kentucky Invites Bids—67 Miles of Roads and Two Bridges to Be Built.

Frankfort, Ky.—Sealed bids will be received by the State Highway Commission at the office of Joe S. Boggs, State Highway Engineer, in the Old Capitol Building, in this city, until March 14, for the construction of various roads and two bridges in a number of counties in the State. Among these are the following: Improvement of a section of the Louisville-Bardstown road, a distance of 6.333 miles in Nelson County, also a section on the same road of 8.501 miles in Bullitt, Spencer and Nelson Counties, and improvement of 9.416 miles in McCreary County, on the Whitley City-Tennessee State line.

A section in Johnson County, on the Paintsville-Louisia road will be improved for a distance of 11.297 miles, and in Grant County, 8.301 miles of the Lexington-Covington road will be improved. In Anderson County, the Lawrenceburg-Versailles road will be improved for a distance of 3.9 miles, and in Lawrence County the Louisa-Paintsville road for 19.618 miles.

The bridges to be built include one in Rowan County on the Midland Trail over Triplett Creek. This will be a steel and reinforced concrete structure, with a 20-ft. roadway having a bituminous surface. A bridge will be also constructed in Caldwell County on the Marion-Princeton road, over Livingston Creek. It will be of steel and reinforced concrete, consisting of two 30-ft. spans, with concrete abutments and center pier.

Copies of plans for this construction may be obtained from the Department of State Roads and Highways with offices at Frankfort.

Jefferson County, Alabama, Invites Road Bids.

Birmingham, Ala.—The Jefferson County Board of Revenue, C. J. Rogers, County Highway Engineer, will receive bids until March 16 at its office here for the construction of the following roads: Reconstruction of base of Roebuck-Chalkville county line road 150,000 square yards of bituminous top, about 14 miles; Leeds county line, surfacing three miles with chert, requiring 4500 cubic yards; Short Creek-Powhatan, grading and surfacing about 3.3 miles, requiring 19,000 cubic yards of excavation with necessary waterways and 5500 cubic yards of cinder.

About 2.5 miles of the Oak Grove-Liz Ford road will also be graded and 20,000 cubic yards of excavation will be necessary, together with waterways.

Plans and specifications are on file at the office of the County Highway Engineer.

Bids Invited for Over 6 Miles of Road.

Aiken, S. C.—Bids for the construction of 6.236 miles of road on state route No. 39 in Aiken County, have been invited by the Board of County Commissioners and will be received at their office here until March 14. The road will begin at survey station 780-00 at the end of project No. 182-A, and will extend toward Monetta to survey station 1108-87.

Plans and specifications and proposal forms are on file at the office of the State Highway Engineer at Columbia.

TEXTILE

Two Johnston Mills Will Build Additions.

Concord, N. C.—Additions for the two Johnston mills in Concord have been planned and contracts for construction awarded. The Brown Manufacturing Co. has let a contract to the Brown-Harry Construction Company of Gastonia for the erection of an addition to its mill which will be equipped for a dye house. The building will have a frontage of 75 feet and will be two stories high.

Contract has also been awarded by the Norcott Mills Company for the erection of a 3-story addition to its mill and construction has begun. The company will erect 8 additional dwellings for operatives.

C. W. Johnston is president of both companies.

Beaumont Mill Will Add 9000 Spindles and Other Facilities

Spartanburg, S. C.—Operations of the Beaumont Manufacturing Company will be largely increased as a result of facilities which are now being added to the company's mills here. The machinery in mills Nos. 1 and 2 will be rearranged and about 9000 spindles added.

A new 2-story and basement mill building, 258 by 86.6 feet, will be erected, in which 450 new looms will be installed, also 186 looms to be removed from the old building. J. E. Sirrine & Company of Greenville are the engineers in charge of the improvements.

Betterments for Asheville Cotton Mills.

Asheville, N. C.—Among improvements which have been planned by the Asheville Cotton Mills here, and for which J. E. Sirrine & Company of Greenville, S. C., are the engineers, is the rearrangement of the machinery, replacing a part of the present spinning equipment with new machinery and the installation of individual motor drives for the spinning equipment.

Water and sewerage facilities for the mill village are also being planned.

Will Add 8000 Spindles, Build Additional Mill, Etc.

Thomasville, N. C.—Plans have been made by the Amazon Cotton Mill here to increase its facilities by installing 8000 additional spindles, building an additional mill, etc. J. E. Sirrine & Company of Greenville, S. C., are the engineers. Machinery in the present building will be rearranged for spinning and twisting and preparatory machinery installed in the new building, motor drives to be used throughout.

Elk Cotton Mill to Enlarge.

Fayetteville, Tenn.—The Elk Cotton Mill will enlarge its plant here according to plans by J. E. Sirrine & Company of Greenville, S. C. It is expected that about 4000 spindles will be added and the necessary machinery and twister frames. The mill is capitalized at \$300,000 and is at present equipped with 15,000 ring and 7500 twisting spindles for the production of cotton yarns. R. A. Rees is president.

Breckenridge to Have \$500,000 Cotton Mill.

Breckenridge, Tex.—It is planned to build a cotton mill here to cost \$500,000, according to Ray B. Leach, secretary of the Chamber of Commerce. He states that a majority of the stock will be subscribed by local business men. The proposed plant will manufacture gingham and similar fabrics.

Plans Progressing for Wadesboro's Cotton Mill.

Wadesboro, N. C.—Additional information relative to the construction of the proposed cotton mill here by the Wade Manufacturing Company, to which reference was made by the MANUFACTURERS RECORD a few weeks ago, has been given out.

Contract has been awarded to Thompson Bros. of Charlotte and Atlanta for the erection of the buildings and bids for the machinery will be opened about April 1. They will be of brick construction and will cost \$200,000. The installation will include 7500 spindles and 400 looms for the production of outing flannels. All equipment will be electrically driven, power has been contracted for with the Yadkin River Power Company, about 500 horse power to be employed. A total of 100 to 125 operatives dwellings will be erected.

Robert & Co., Inc., of Atlanta are the engineers and it is expected that plans for all estimates will be completed within 30 days.

Officers of the Wade Manufacturing Company, which is capitalized at \$750,000, include W. P. Parsons, president; T. C. Cox, vice president; W. Henry Liles, secretary-treasurer, and J. B. Covington, manager.

Southern Bleachery Plant at Taylors.

Greenville, S. C.—The proposed bleachery and finishing plant which will be built at Taylors, S. C., by the Southern Bleachery Incorporated, of this city, H. R. Stephenson, president and general manager, has been designed for an ultimate capacity of 3,000,000 yards per week. The building will be E shaped, 718 feet long and 314 feet wide, the finishing end to be two stories and basement, 314 by 106 feet, and the remaining portion one story. Its construction will be of mass concrete walls with wooden beams, cast iron columns, wooden floors and steel sash. The daylight type of construction will be used, except for kier and washer room, where concrete window piers will be employed.

The warehouse will be of standard mill construction and the power plant of reinforced concrete. Motor drives will be used throughout. For processing, steam at high pressure will be used from boilers and at low pressure from engine exhaust.

J. E. Sirrine & Company are the engineers and the Gallivan Building Company are the contractors, both of Greenville.

Second Cotton Mill for Dallas County.

Dallas, Tex.—Organization of the second cotton mill for Dallas County, in which M. L. Cannon of Concord, N. C., and L. W. Robert of Atlanta, will be largely interested, has been announced. This mill will be located at Mesquite by a new company to be known as the Mesquite Textile Mill Company and its initial capital will be \$400,000, which may ultimately be increased to \$1,000,000.

Schuyler B. Marshall was elected president of the company; C. Rugel, vice-president, and John S. Lawrence, secretary. In addition to the officers, M. L. Cannon, Jr., I. N. Range, Harry Williams, M. C. Snyder, S. D. Lawrence and J. D. Chapman will serve as directors.

Belton Mills Organize with \$200,000 Capital.

Summerville, Ga.—At a meeting of local business men here, the Belton Mills were organized with a capital stock of \$200,000 for the purpose of building and operating a cotton mill. The plant is to be located in southeast Summerville, and will be equipped for the manufacture of fine sheeting and duck. It will begin operations as soon as buildings can be erected and machinery installed.

Officers of the company are J. M. Bellah, president and treasurer; E. A. Leonard, vice-president and Sam C. Martin, secretary.

LUMBER AND BUILDING MATERIALS

Lumber Production and Shipments Gain.

Washington.—While production and shipments of lumber rebounded sharply last week from the temporary restrictions imposed by the severe weather of the middle of February, new business for that week decreased still further as compared with the rush of orders so far this year. However, new business reported for the week ending February 17, according to the weekly review of the National Lumber Manufacturers Association, was about 35 per cent larger than for the corresponding week last year. The present decline in new business is attributed principally to the West Coast section and is largely due to conservative acceptance of orders on account of impairment of current productive capacity by the recent unfavorable weather conditions. As accumulated orders for the year are still increasing faster than shipments and much faster than production, the probably temporary recession in new business is not unwelcome.

With respect to production, the 379 mills reporting show their shipments to be 128 per cent and orders 110 per cent; Southern pine mills, taken by themselves, show proportions of 119 and 114 per cent respectively, while with the West Coast mills shipments were 122 per cent of production and orders 100 per cent. With respect to the established normal production for the week, which represents 350 of the above mills, actual production was 87 per cent, shipments 111 per cent and orders 94 per cent.

The Southern Pine Association, reporting from New Orleans, says that the continuance of favorable weather for logging in southern pine territory last week resulted in a 3 per cent increase in production over the previous week. The labor supply is reported as adequate, while the abundant car supply is reflected in an increase of 13½ per cent in shipments. New orders decreased approximately 6 per cent but the unfilled orders file slightly increased.

The California Redwood Association reports that though the mills are working overtime, orders and shipments greatly exceed production.

The Northern Pine Manufacturers Association of Minneapolis reports weather conditions in the middle northwest greatly improved.

The Michigan Hardwood Manufacturers Association, Cadillac, Michigan, reviewing recent lumber conditions in that section, reports that the production for January exceeded

shipments by 1,500,000 feet. The severe blizzard in the middle of February handicapped work in the woods and tied up the railroads. Railway embargoes to New England territory and points south of Grand Rapids on the Pennsylvania and east on the New York Central and other lines, as well as coal shortage, have been restrictive factors.

The following table gives a statistical summary of the lumber movement of the country as represented by the mills reporting to the National Lumber Manufacturers Association for the past week, for the corresponding week of 1922 and the week ending February 17th, last:

	Past Week	Corresponding Week 1922	Preceding Week 1923 (Revised)
Production	203,197,660	173,761,709	165,292,423
Shipments	259,193,987	176,856,796	206,791,292
Orders	222,823,309	172,584,367	246,048,301

The lumber movement for the first eight weeks of 1923 as compared with the same period of 1922, is as follows:

	Production	Shipments	Orders
1923	1,579,225,455	1,962,604,791	2,225,936,692
1922	1,400,735,059	1,328,366,101	1,392,238,437
1923 Increase	178,490,396	633,238,690	833,698,255

Southern Pine Shipments Over 85,000,000 Feet for Week.

New Orleans, La.—The Southern Pine Association reports lumber shipments for the week ended February 23 of 85,182,048 feet, an average per mill of 686,952 feet. This compares with shipments for the previous week of 75,630,144 feet, or an average per mill of 605,041 feet. Orders for the week amounted to 81,278,416 feet, a mill average of 655,471 feet, compared with orders for the previous week of 87,428,272 feet, an average per mill of 699,426 feet.

A total of 71,426,173 feet was produced for the week, an average per mill of 576,018 feet, as against a total production for the previous week of 69,888,170 feet, an average per mill of 559,105 feet.

The following is a summary of 124 mills:

	Cars.	Feet.
Orders on hand beginning of week	20,703	451,491,024
Orders received during week	3,727	81,278,416
Total	24,430	532,769,440
Shipments during week	3,906	85,182,048
Orders on hand end of week	20,524	447,587,392

LUMBER MOVEMENT FOR EIGHT WEEKS, AND FOR THE WEEK ENDING FEBRUARY 24.

	Production		Shipments		Orders	
	1923	1922	1923	1922	1923	1922
Southern Pine Association:						
Total	607,827,637	591,891,847	691,114,014	516,562,681	792,551,674	544,122,414
Week (124 mills)	71,426,173	72,672,993	85,182,048	72,368,050	81,278,416	70,076,325
West Coast Lumbermen's Ass'n.:						
Total	661,741,819	603,750,305	814,214,557	540,131,919	876,643,305	525,695,324
Week (139 mills)	91,964,414	77,837,718	111,953,156	70,201,993	92,385,571	65,664,542
Western Pine Mfrs. Ass'n.:						
Total	95,908,000	66,523,000	191,090,000	136,945,000	193,800,000	151,550,000
Week (38 mills)	13,190,000	8,553,000	27,729,000	18,014,000	20,600,000	21,775,000
Calif. White & Sugar Pine Mfrs.:						
Total	22,940,000	13,692,000	52,977,000	23,029,000	124,841,000	48,933,000
Week (5 mills)	635,000	no cut	3,337,000	589,000	3,012,000	972,000
Calif. Redwood Ass'n.:						
Total	56,905,000	46,463,000	68,937,000	48,071,000	93,019,000	54,487,000
Week (14 mills)	8,305,000	5,846,000	12,040,000	7,730,000	6,682,000	7,236,000
North Carolina Pine Ass'n.:						
Total	58,690,299	64,349,907	64,991,820	50,265,501	68,521,713	53,642,699
Week (35 mills)	8,303,998	5,471,783	7,097,763	5,261,323	5,571,200
Northern Hem. & H'wood (Sftw'd):						
Total	17,735,000	14,065,000	16,305,000	13,361,000	18,056,000	13,808,000
Week (16 mills)	2,084,000	548,000	2,261,000	856,000	1,836,000	1,289,000
Northern Pine Mfrs. Ass'n.:						
Total	57,477,700	...	62,975,400	...	58,504,000	...
Week (8 mills)	6,887,600	...	9,137,000	...	7,528,000	...
General Total for 8 weeks (Sftw'd)	1,579,225,455	1,400,735,059	1,962,604,791	1,328,366,101	2,225,936,692	1,392,238,437
Northern Hem. & H'wood (H'dwood) 8 weeks	24,567,000	...	21,453,000	...	21,036,000	...
General Total for week	203,197,660	173,761,709	259,193,987	176,856,796	222,823,309	172,584,367

Purchases Timber Tract and Railroad in Kentucky.

Ashland, Ky.—The holdings of W. H. Dawkins in the Dawkins Lumber Co. and the Big Sandy & Kentucky Railroad have been purchased by John W. Kitchen, president of the Kitchen Lumber Company of this city.

The properties include 40,000 acres of timber land in Magoffin and Breathitt counties, a sawmill of 80,000 feet daily capacity, and the railroad which consists of 42 miles of standard gauge track and equipment, connecting Dawkins on the Chesapeake & Ohio with Royalton and extending 20 miles further into the company's timber tract.

\$2000 in Prizes for Lumber Industry Improvement.

The National Lumber Manufacturers Association will award \$2000 in prizes for a machine, a method, or a device which will in practical application result in a material saving of labor, time, material or expense in the lumber manufacturing industry. Entries will close March 15 and will be submitted at the annual meeting in New Orleans March 21. The first prize is \$1000, second prize, \$500, three prizes of \$100 each and four of \$50.

MECHANICAL

New System for Curing Sweet Potatoes.

Columbus, Ga., March 1—[Special.]—The sweet potato is undoubtedly coming into its own. It is rapidly gaining favor throughout the country and is recognized as a standard article of diet. In the matter of food value it is even superior to the Irish potato, probably one of the most widely used vegetable. The Southern sweet potato ranks very high. It does not contain as much starch but more sugar than the Irish potato, and as it also has much muscle building protein, this gives it a higher fuel value. The Southern sweet potato differs from the so-called Jersey sweet potato and when cooked to suit its particular qualities is a very delicious article of food. The development of this important field depends to a large extent on the success of the curing methods employed for its proper preservation. Failure to cure properly will undoubtedly prove a barrier to progress and perhaps ultimate destruction of the industry.

The method very much in vogue in the South has been that of curing by stoves. It is claimed that there is much loss under this method.

Mr. C. C. Hartpence of Columbus, Ga., has perfected the "Duplex System" of air control for conditioning sweet potatoes. This system has been installed during 1922 in many houses of a total of 100,000 bushels storage capacity. This method is by the use of forced air, which is controlled by using blower type fans, heaters and distributing pipes. The air is heated or not according to requirements and is forced through and around the potatoes, providing positive and uniform drying without the irregularity which results from the stove drying method.

The crates are treated in compartments which permits processing of various lots at one time, without any connection between compartments. These can be treated differently at the same time. The compartment usually holds about 2000 to 2500 bushels in crates.

It is not necessary under this system to leave the potatoes in the field to dry but they can be brought in even under excess moisture.

To prevent soft rot is now the important matter. Excess moisture must be dispelled at once. The usual practice is to force cool air through the potatoes for three or four days until all surface moisture is dispelled. By raising the air temperatures for a few minutes at intervals soft rot is controlled. When the surface moisture has been removed and

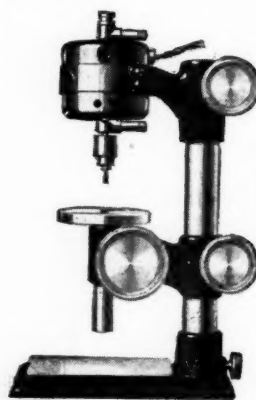
drying commenced the air is raised to about 82 degrees. Connected heat is the only kind of heat used in forced air which is transported from one point to another by mechanical means.

The next treatment is that of forcing cool air through the potatoes. Surface evaporation takes place. This carries off the moisture and closes the pores of the potato, providing a peel which has cleared itself of minute particles and has changed in its consistency. The total treatment approximates ten days and the average loss in weight averages three or four pounds per bushel. This system provides a positive and uniform treatment which develops a superior eating potato. This system depends largely on correct engineering, so that uniform and high class results may be had from another application. The test of the whole matter is found in the fact that large shipments and low prices for stove potatoes do not prevent forced air potatoes from bringing high prices. But such a system as forced air makes a great demand for the product at big prices, because it has a superior quality and weight. Mr. Hartpence has been an engineer for a number of years and has taken great pains in developing this system, which is meeting with success.

I. S. FIELD.

Sensitive Electric Bench Drill.

A new, portable, sensitive, electric, bench drill recently placed on the market is shown in the accompanying picture. It is the result of a long series of experiments by the manufacturers, the Wisconsin Electric Company, Racine, Wisconsin, and it is known by the name "Dumore," the same as other electrical tools and appliances manufactured by this organization. It can be used on many different kinds of work, although it is stated it can be depended upon for absolute accuracy and extreme sensitiveness. It is equipped with a motor of the same make dynamically balanced and which runs equally well on either alternating or direct current.



SIDE VIEW OF DRILL.

A ball thrust bearing takes up all end play and there is positive lubrication of all bearings. The No. O Jacobs chuck has been specially ground and perfectly balanced to eliminate vibration and secure greater accuracy; the chuck capacity is from 0 to 1/8 inch. Perfect concentricity in the drill is had by carefully grinding the gripping points of the chuck jaws. The drill can be easily used as a portable hand drill if desired. A foot-controlled rheostat gives six different speeds and off.

The work table is operated by a rack and pinion feed which is governed by the operator's hand so it is extremely sensitive. The table itself is very light and the gear ratio is figured to perfectly balance its weight, thereby making the drill so sensitive that extremely small drills can be used without danger of breaking them. A depth gauge, regulated by a thumb screw, prevents the drill from going beyond a required depth. The table is 3 1/2 inches in diameter, the center of which is 3 inches from the column, which permits of drilling to the center of a 6 inch circle. There are several drilling fixtures indispensable for a sensitive drill on fine work.

A base 5 inches by 8 inches forms the mounting for this drill, the base being made of gray iron having four screw holes for fastening to a bench. The height over all is 16 inches. The finish is fine, part of black enamel and part nickel plated.

Construction Department

EXPLANATORY

Additional information is published about all enterprises mentioned in this department as soon as such data can be obtained. Further facts about any incomplete or incorrect item reported in these columns are always appreciated.

DAILY BULLETIN

The Daily Bulletin is published every business day to enable its subscribers to follow up promptly the industrial, commercial, railroad, financial, building and general business development of the South and Southwest. To machinery manufacturers and dealers, contractors, engineers, and others who require daily information of every new enterprise organized and details about important additions to enterprises already established, the Daily Bulletin is invaluable. Subscription price, \$20.00 a year.

Airplane Plants, Stations, Etc.

Va., Newport News—Government will rebuild helium purification plant at Langley field; plans being made.

Bridges, Culverts and Viaducts.

Ala., Birmingham—City, B. E. McLendon, Prest., City Comsn. contemplates building viaduct across railroads on south side.

Ark., Texarkana — Miller County plans building 500-ft. bridge across Sulphur River, at Pace's Ferry, 12 mi. southwest of Texarkana; 150-ft. steel central span; wood approaches. Address County Commrs.

Ga., Jackson — For full details see Road and Street Construction.

Kentucky — State Highway Comsn., will build 2 bridges. For proposal details see Mch. Wanted—Bridge Construction.

Ky., Pikeville—Pike County Fiscal Court, W. E. Flannery, County Judge, let contract to Rahl Steel Bridge Co., at \$28,000 for highway bridge across Tug River at mouth of Peter Creek; 3-pier, reinforced concrete. (Lately noted.)

La., Springville—Louisiana Highway Commissioners, Raymond Bldg., Baton Rouge, opened bids for construction of highway bridge over Tickfaw River, Livingston Parish, Proj. No. 79, Sec. C. W. Cooper, Anniston, Ala., lowest bidder at \$13,365.20. (Lately noted.)

Miss., Belzoni—For full details see Road and Street Construction.

Miss., Jackson—For full details see Road and Street Construction.

Miss., Oxford—Lafayette County Board of Supvrs., W. M. Woodward, Clk., will receive bids until March 6 to build 3 bridges and approaches as follows: 80-ft., steel bridge and two 20-ft. approaches across Yocona River canal in Beat 1, at Markette's; also 60-ft. bridge across Lafomby Creek, Howell's Crossing, Beat 3, and 200-ft. bridge on Price Levee across Yocona River on Oxford & Tula road, Beat 5.

Miss., Vicksburg—Warren County Supvrs. will build 4 trestles. For proposal details see Mch. Wanted—Bridge Construction.

Missouri—State Highway Dept., Jefferson City, Mo., plans building 46 bridges as follows: Andrew County, on road from Oregon to Savannah, State Proj. Route 1; Barton County, on road from Golden City to Lamar, State Proj. Route 36, Sec. 6; Bollinger County, on road from Fredericktown to Jackson, State Proj. Route 9, Sec. 101; Caldwell County, on road west of Hamilton, State Proj. Route 8, Sec. 12; Callaway County, 2 sections on road from Jefferson City to Columbia, State Proj. Route 7; Carroll County, on road from Waverly to Carrollton, State Proj. Route 3; Clay County, on road from North Kansas City to Liberty, State Proj. Route 1; Holt County, on road from Oregon to Savannah, State Proj. Route 1; Jefferson County, on road from St. Louis to Festus, State Proj. Route 9.

Lawrence County, 3 sections, on road from Phelps to Halltown, State Proj. Route 14, Secs. 9 and 10; McDonald County, on road from Neosho to Anderson, State Proj. Route 1, Sec. 108; Newton County, on road from Neosho to Goodman, State Proj. Route 1, Sec. 107; Pemiscot County, on road from Portageville to Arkansas State line, State Proj. Route 9, Sec. 142; Phelps County, 2 sections, on road from St. Louis to Springfield, State Proj. Route 14.

Pulaski County, on road from Waynesville to Arlington, State Proj. Route 14; Ripley County, on road from Doniphan to Poplar Bluff, State Proj. Route 42, Sec. 12; Schuyler County, on road from Lancaster to Kirksville, State Proj., and on road from Greentop to Queen City, State Proj. Route 7; Shelby County, on road from Shelbyville to Shelbyna, State Proj. Route 15, Sec. 23; Stoddard County, on road from Fisk to Dexter, State Proj. Route 16; Washington County, on road from De Soto to Potosi, State Proj. Route 21, Sec. 4.

Missouri—State Highway Dept., Jefferson City, Mo., let contracts for 21 bridges as follows: Bollinger County, on road from Marble Hill to Advance, over Castor River Diversion Channel, reinforced concrete piers, steel truss spans, 20 ft. roadway structure, to Pioneer Construction Co., Kansas City, Mo., at \$57,288.47; Camden County on road from Jefferson City to Linn Creek, over Grande Glaize, steel truss spans, 20 ft. roadway, concrete floor, to Pioneer Construction Co., Kansas City, Mo., at \$43,859.75; Chariton County on road from Brunswick to Keytesville, over Palmer Creek, steel truss span, reinforced concrete slab spans, concrete piers, reinforced concrete bents, to Chas. Parker, Keytesville, Mo., at \$15,674.00.

Crawford County on road from Steelville to Cherryville, over Butte Creek, reinforced Deck girder span, 20 ft. roadway, reinforced concrete piers, to Powell, Gauen Co., Collinsville, Ill., at \$5057; Douglas County, on road from Ozark to Ava, over Cowskin Creek, reinforced concrete deck girder spans, reinforced concrete piers, 20 ft. roadway, to Allhands & Davis, Joplin, Mo., at \$13,513.42.

Gentry County, on state road from Albany to Stanberry, over West Fork of Grand River, drainage ditch, beam spans, wood floor, 20 ft. roadway, creosoted wood pile bents skewed, reinforced concrete slab span, reinforced concrete abutments, 20 ft. roadway, to Illinois Steel Bridge Co., Jacksonville, Ill., at \$19,875.59; Gentry County, state road from Stanberry to Albany, West Fork of Grand River, steel truss span, wood floor, 20 ft. roadway, I-beam spans, reinforced concrete piers, creosoted wood pile bents, to Illinois Steel Bridge Co., Jacksonville, Ill., at \$30,439.20; Gentry County, state road from Albany to Stanberry, over Middle Fork of Grand River, steel truss span, concrete floor, 20 ft. roadway, rein-

forced concrete piers, reinforced concrete bents, to Illinois Steel Bridge Co., Jacksonville, Ill.

Holt County, state road from Mound City to Rock Port, over Squaw Creek drainage ditch, I Beam spans, wood floor, 20 ft. roadway, creosoted wood pile bents, to Pittsburgh-Des Moines Steel Co., Des Moines, Iowa, at \$8843.34; Knox County, state road from Edina to Memphis, over North Fork of South Fabius, steel truss span, reinforced concrete abutments, concrete floor, to W. H. & G. H. Turner, Memphis, Mo., at \$19,436.80; Laclede County, state road northwest of Lebanon, over Little Bear Creek, reinforced concrete deck girder span, reinforced concrete abutments, 20 ft. roadway, over Bear Creek, steel truss span, 20 ft. roadway concrete floor, to General Construction Co., St. Louis, Mo., at \$14,604.95.

Lawrence County, state road from Jasper County line east, over West Fork Stahl Creek, reinforced concrete deck girder span, 20 ft. roadway, reinforced concrete abutments, over Stahl Creek, steel truss span, 20 ft. roadway, concrete floor, reinforced concrete slab span, reinforced concrete abutments, 20 ft. roadway, to Carterville Construction Co., Carterville, Mo., at \$19,598.15; Lincoln County, state road south of Moscow Mills, over Crooked Creek, steel truss span, reinforced concrete abutments, concrete floor, 20 ft. roadway, to J. P. Sparks, Kirkswood, Mo., at \$13,269.25.

Pemiscot County, state road from Hayti to Arkansas State line, over drainage ditch, I Beam spans, wood floor, 20 ft. roadway, reinforced concrete bents, steel truss span, 20 ft. roadway, wood floor, reinforced concrete piers, to Reynolds, Bloker & Crews of Caruthersville, Mo., at \$22,833.91; Pulaski County, state road from St. Louis to Springfield, over Roubidoux Creek, reinforced concrete sprandrel filled arch spans, reinforced concrete abutments, concrete piers, to Ross Construction Co., Des Moines, Iowa, at \$44,035.00; Scott County, state road from Benton to Charleston, over North Cut D. D., steel truss span, wood floor, 20 ft. roadway, reinforced concrete abutments, to G. E. Stoner, Charleston, Mo., at \$17,883.70.

Wayne County, state road from Piedmont to Bollinger County line, over Hubble Creek, steel truss span, 20 ft. roadway, reinforced concrete abutments, concrete floor, over Peters Creek, reinforced slab span skewed, 20 ft. roadway, reinforced concrete abutments, to Muskogee Construction Co., Tulsa, Okla., at \$11,511.75; Jackson County, state road, St. Louis to Kansas City primary, over East Fork of Little Blue River, low steel truss span, 20 ft. roadway concrete floor, 20 ft. reinforced concrete slab approach span each end, reinforced concrete piers, reinforced concrete bents, to W. A. Ross, Kansas City, Mo., at \$13,447.50.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Jackson County, state road from Kansas City, east on Sni-a-bar road, over Little Blue River, high truss steel span, concrete floor, 20 ft. roadway, low truss steel approach span, reinforced concrete piers, reinforced concrete bents, to W. A. Ross, Kansas City, Mo., \$26,009.00; Jackson County, state road from St. Louis to Kansas City, over Sni-a-bar Creek, reinforced concrete deck girder span, reinforced concrete abutments, 20 ft. roadway, steel truss spans, concrete piers, reinforced concrete bents, to W. A. Rose, Kansas City, Mo., at \$23,103.00; Newton County, state road from Neosho to Arkansas State line, over Meeks Branch, reinforced concrete deck girder span, reinforced concrete abutments, 20 ft. roadway, to J. P. Wolfenbarger, Neosho, Mo., at \$6283.38.

Miss., Meridian—For full details see Sewer Construction.

Mo., Kingston—State Highway Dept., Jefferson City, Mo., let contract to Highway Construction Co., Tulsa, Okla., at \$30,826.20 for 3 concrete and steel bridges on road west of Hamilton; Caldwell County, State Proj. Route S, Sec. 13.

Mo., St. Louis—For full details see Water Works.

North Carolina—State Highway Commsn., Raleigh, N. C., will construct 3 bridges as follows: Proj. 392, Robeson County, bridges and approaches over Big Swamp, Route 211; Proj. 804, Avery County, bridge over Horse Creek between Minneapolis and Plum Tree, Route 60; Proj. 659-A, bridges on road in Mecklenburg County between Charlotte and Cabarrus county line, Route 27; invite bids early in April.

S. C., Conway—For full details see Road and Street Construction.

Tex., Liberty—For full details see Road and Street Construction.

Tex., Seguin—Guadalupe County, J. R. Williams, County Judge, let contract to J. W. Goodreem, Seguin, to construct concrete bridges and culverts on 9.5 mi. S. H. No. 3.

Canning and Packing Plants.

Fla., Sebring—Sebring Citrus Assn., interested in erection of factory to can grapefruit hearts; cost \$30,000; capacity of 1000 boxes of grapefruit and output of 17,000 cans daily; also plans to construct \$40,000 addition to packing plant.

Mo., Carthage—F. H. Ellison will erect canning plant, daily capacity 5000 cans.

N. C., Columbus—Blue Ridge Packing Co., Fred W. Blanton, Prest., will establish \$10,000 canning plant with capacity of about 200,000 cans vegetables and fruits.

Clayworking Plants.

Ala., Birmingham—Union Brick & Tile Co. increased capital to \$300,000.

Miss., Hattiesburg—Riverside Brick & Mfg. Co., W. S. Morrison, will increase capital to \$50,000.

Mo., Montgomery City—Harbison-Walker Refractories Co., capital \$50,000, inceptd. by J. C. Bily, H. B. Myer, S. M. Langdon.

N. C., Four Oaks—Meadow Brick Co., lately noted inceptd. with \$25,000 capital, organized with J. W. Sanders, Prest.; W. H. Smith, Secy.-Treas.; has plant with output of 50,000 to 75,000 bricks daily; will install clay loading machine. (See Mch. Wanted — Clay Loading Machine.)

Tex., Breckenridge—The Acme Brick Co., Jack B. Robert, will construct brick plant.

Tex., Colorado—Mitchell County, J. C. Hall, Judge, has plans for construction of 132 ft. reinforced concrete bridge over Lone Wolf Creek, approx. cost \$20,000. F. F. Dubose, County Engr.

Coal Mines and Coke Ovens.

Ala., Birmingham—American Fuel Co., capital \$500,000, inceptd. with Chas. B. Teasley, Prest., Montgomery; W. C. Scott, Secy.-Treas., Beltona, P. O. Warrior, Ala.

Kentucky—Fordson Coal Co., Detroit, Mich. inceptd. with \$15,000,000; organized to operate all coal interests of Ford Motor Co., Detroit, including properties in Kentucky and West Virginia.

Ky., Louisville—Liberty Coal & Coke Co., capital \$50,000, inceptd. by Moses S. Butler, Louisville, A. R. Anderson and R. W. Atkins, both Pineville.

Ky., Louisville—Tug River Coal Corp., chartered by W. E. Caldwell, James Willey and R. H. Lucas.

Ky., Sergeant—Imperial Elkhorn Coal Co., main office, Detroit, Mich. reported to have purchased 300 acres additional coal lands on Colly Creek and also contemplates another lease from Virginia Iron, Coal and Coke Co.; increasing output; build miners houses, etc.

W. Va., Boone County—Westmoreland Coal Co., S. Pemberton Hutchinson, 224 S. 3rd St., Philadelphia, Pa., reported to have purchased 5500 acres land on Ford Fork of Little Coal River from Laurel Coal & Land Co.; will develop.

W. Va., Huntington—Coal River Collieries Co., Harry Leaberry, Prest. (lately noted increased capital to \$2,500,000) will make additional improvements to coal properties on

Coal river; has under construction twin steel tipples, also building mining town.

Concrete and Cement Plants.

Ala., Leeds—Cement Products—Leeds Cement Products Co., inceptd. with H. M. Judge, Prest. and others.

Cotton Compresses and Gins.

Ark., Paragould—Lesser-Goldman Cotton Co., will erect cotton gin.

Mo., Morehouse—E. L. Griffin, F. B. Rauch and A. J. Harrison, interested in incorporation of company with \$15,000 capital to establish cotton gin.

N. C., Wakulla—Wakulla Gin Co., capital \$20,000, inceptd. by John F. McNair, of Lumberton, J. R. McGirt, of Maxton, W. M. Smith of Wakulla.

Okla., Kenefic—W. L. Harris and J. H. Allen of Durant, Okla., interested in construction of gin.

Tex., Anson—T. L. Holland and associates will erect cotton gin.

Tex., Burton—Burton Farmers' Gin Assn., capital \$10,000, inceptd. by A. S. Whitener, J. M. Walsh, E. C. Blessi.

Cottonseed-Oil Mills.

Tex., Lubbock—Lubbock Cotton Oil Co., lately noted inceptd. with \$150,000 capital G. A. Simmons, Mgr., will erect \$100,000 building; will soon invite bids.

Drainage Systems.

Fla., Inverness—Citrus Drainage Dist., Judge E. C. May, establish district to reclaim about 60,000 acres land in east side of Citrus County, in Withlacoochee river and Tsla Apopaka lake region; will invite bids on construction, etc. as soon as project is planned and district formed. (Lately noted.)

Fla., Sarasota—Palmer Corp., R. K. Thompson, local Mgr. will form drainage district to reclaim about 10,000 acres land; approx. cost \$1,000,000.

Miss., Lexington—McWilliams Co., Memphis, Tenn., has contract to construct Abiaca drainage canal, reclaiming thousands of acres in Holmes County.

Tenn., Selmer—McNairy County Comms. will construct 7 mi. drainage canals in Moss Creek Drainage Dist. No. 17; approx. removal of 51,161 cu. yds. earth; bids until Mch. 10.

Electric Light and Power Plants.

Fla., Gainesville—For full details see Sewer Construction.

We Publish a Daily Bulletin of brief news items of business activities in the South and Southwest which open many Sales Opportunities.

You realize the advantage of being furnished every business day with authoritative information of industrial undertakings; engineering, construction and building operations, and State, County and municipal improvements in the entire South and Southwest. Dealers in Machinery and Equipment, Railroad and Contractors and Builders find this service thorough and invaluable. It gives you an opportunity to get in touch with firms when they are starting new venture or are expanding established enterprises, and therefore in many cases in the market for machinery, equipment or supplies at the time you read the news item.

May we send you a sample copy of the Daily Bulletin and complete information?

MANUFACTURERS RECORD

BALTIMORE, MD.

Fla., Jacksonville—For proposal details see Machinery Wanted—Power plant Machinery and Electric Line Material.

Fla., Jacksonville—City, Frank H. Owens, Commr. of Public Utilities, will construct substation on Enterprise St. (Lately noted to expend \$850,000 in improvements to system.)

Fla., Lake City—For full details see Sewer Construction.

Fla., Miami—Coral Gables Utilities Co., capital \$500,000, inceptd. with George E. Merrick, Pres.; Edwin G. Bishop, Secy.-Treas.

Fla., Orlando—Orlando Utilities Commsn. let contract to Cornell-Mathers Co., Dist. Mgr. Delta Star Electric Co. for 2 steel towers, 50 ft. long and 40 ft. high, together with complete switching and line protection apparatus; equipment furnished by Delta Star Electrical Co., Chicago, Ill.

Ga., Atlanta—For full details see Land Developments.

Ga., Milltown—Lanier County Power Co., capital \$300,000, inceptd. by F. E. Hatch, Albany. R. T. Berryhill of Milltown, and associates; contemplate constructing hydro electric plant on Lake Irma, Banks Pond, covering 11,000 acres; will construct canal connecting the pond and the town and water will be conducted to Lake Irma through pipe line; contract let; cost \$298,000; contemplate establishing winter resort, tourist hotel, etc.

Miss., Jackson—See Miss.-Vicksburg.

Miss., Boyle—Boyle Light & Power Co., incorporated by S. Sanderstone, D. C. Smith and others.

Miss., Vicksburg—H. C. Couch, Pres. and J. L. Longino, V. P. of Arkansas Light & Power Co., Pine Bluff, Ark., and associates acquired control of properties of Vicksburg Light and Traction Co., Vicksburg and Jackson Public Service Co., Jackson, Miss.

Mo., Kirksville—City defeated \$40,000 electric light bonds. Address The Mayor. (Lately noted.)

Mo., Lanagan—Indian River Power Co. will expend \$10,000 in installation of new equipment this summer.

Mo., St. Louis—For full details see Water Works.

N. C., Lexington—Board of City Commrs. let contract to General Electric Co. for fixtures and installation of white way.

N. C., Morganton—Burke Power Co., capital \$1,000,000, inceptd. by A. M. Kistler, S. R. Collett and W. C. Ervin.

N. C., Mount Alry—City Water & Light Dept. will develop 1000 H. P. cost about \$120,000; development to begin within 12 months.

N. C., Roanoke Rapids—Roanoke Rapids Power Co. contemplate expending \$250,000 in development of additional power.

Okla., Tulsa—For full details see Land Developments.

Tenn., Chattanooga — Tennessee Eastern Electric Co. authorized by State Railroad and Public Utilities Commsn. to issue \$500,000 in bonds and \$267,000 in stock; will improve and extend operations in East Tennessee; will raise head of dam on Watauga River from 35 to 70 ft.; doubling capacity of plant.

Tenn., Knoxville—Knoxville Power & Light Co., C. H. Harvey, Pres. has made arrangements with Tennessee Electric Power Co. for construction of second or duplicate 120,000 volt transmission line into Knoxville, cost about \$300,000; will install 10,000 K.W. transformer at local sub station.

Tex., Beeville—Texas Central Power Co. will construct power and ice plant; plans by John M. Marriott, Archt.

Tex., Childress—Texas Central Power Co. is having plans prepared by John M. Marriott, for power and ice plant.

Tex., Granbury—For full details see Water Works.

Tex., Houston—For full details see Land Developments.

Tex., Kosse—Kosse Light & Power Co., increased capital to \$25,000.

Tex., Vernon—Texas Central Power Co. is having plans prepared by John M. Marriott for power plant.

Va., Stuart—W. H. Clark contemplates adding a 100 K. W. generator.

W. Va., Huntington—For proposal details see Mch. Wanted—Monolite System.

Flour, Feed and Meal Mills.

N. C., Henderson—Seaboard Feed Mills, Inc., chartered with C. V. Singleton, Pres.; F. B. Robards, Secy.-Treas.

Tex., Dallas—Pearlstone Mill & Elevator Co., Julius H. Pearlstone, Pres., let contract to Jones-Hettelslater Construction Co., Kansas City, Mo., for construction of additional unit consisting of 6 reinforced concrete tanks with capacity of 200,000 bu. grain.

Tex., Plainview—Jeffus & Deloach Grain Co., capital \$10,000, inceptd. by A. B. Deloach, W. M. Jeffus and L. C. Wayland.

Foundry and Machine Plants.

Ala., Holt—Central Foundry Co., Geo. A. Harder, Pres., main office 90 West St., New York, let contract to Ingalls Iron Works Co., Birmingham, to erect 364x140-ft. foundry building with 50x50 cupola, used exclusively for mfr. of Universal type pressure pipe in sizes from 2 to 18-in. in diam. (Lately noted.)

Md., Baltimore—Baltimore Gas Appliance Mfg. Co., Norman James, Secy., Bayard and Hamburg Sts., let contract to B. F. Bennett Building Co., 123 S. Howard St. to construct brick and concrete building; approx. cost \$50,000; mfr. gas stoves. (Supersedes recent item.)

Mo., St. Louis—Frank J. Smith Foundry Co., capital \$8000, inceptd. F. J. Smith, O. F. Karbe and J. J. Waddock.

N. C., Kernersville—American Iron Works, Inc., capital \$75,000, chartered by Allen C. Marion C. and Ora L. Smith; has plans for building; to mfr. steam boilers, radiators, heaters, etc.

Okla., Tulsa—S. O. S. Tool & Supply Co., capital \$50,000, inceptd. by Louis LaFlore, R. J. Rennie both Oklahoma City, M. M. Lain of Tulsa.

Tenn., Chattanooga — Walsh & Weldner Boiler Co. increased capital from \$700,000 \$1,000,000.

Tex., El Paso—Vonde's Visible Pump Co., capital \$24,000, inceptd. by E. A. Vonde, John Pullman, S. H. Palm.

Tex., Fort Worth — Castings — General Foundry Co. (lately noted inceptd.) organized with B. N. Wadley, Pres.; T. H. Stewart, Secy.-Treas.; will establish plant at 607 N. Main St.; mfr. gray iron castings, daily capacity 30 tons.

Va., Graham—Graham Furnace Corp., W. B. Lindsay, Pres., increased capital from \$200,000 to \$1,000,000; changed name from Kyva Ferro-Manganese Mining Corp., and office from Abingdon, Va.

W. Va., Dunbar—Gravelly Motor Plow & Cultivator Co., capital \$200,000; inceptd. with B. F. Gravelly, Pres.; Charles F. Sterrett, Secy.; has plant; mfr. truck farm and garden cultivator; estimated daily capacity 200 machines.

Gas and Oil Enterprises.

Ga., Lafayette—McLemore Cove Oil & Gas Co., office 39 Chamberlain Bldg., Chattanooga, Tenn., inceptd. by F. M. Shaw of Shaw, Ga., and others, have about 10,000 acres of land under lease and will develop. Lately noted. (See Mch. Wanted—Cable Tool (Rig.)

Ky., Ashland—Short Fork Oil Co., capital \$80,000, inceptd. by Sam J. Patrick, David and Iley B. Browning.

Ky., Prestonsburg—Dicks Creek Oil & Gas Co., capital \$51,000, inceptd. with A. C. Harlowe, Pres.; J. P. Tackett, Secy.

N. C., New Bern—W. W. Griffin, T. A. Assel, E. C. Rea and others interested in development of oil lands in eastern Carolina.

Okla., Beaver—Balko Development Co., increased capital \$15,000 to \$25,000.

Okla., Cushing—Sinclair Crude Oil Purchasing Co. let contract to Phoenix Iron Works, Meadville, Pa. for construction of eleven 80,000 bbl. steel tanks. (Lately noted.)

Okla., Enid—Champlin Refining Co., capital \$300,000, inceptd. with H. H. Champlin, Pres.

Okla., Muskogee—Yahola Producing Co., capital \$100,000, inceptd. by J. Laroy Slusher, C. P. Gotwals, M. H. Moore.

Okla., Oklahoma City—Tory Oil Co., capital \$50,000, inceptd. by J. T. Sturm, C. H. Newell, L. C. Ritter.

Okla., Okmulgee—Perry Drilling Co., capital \$25,000, inceptd. by Harry F. Perry, J. W. McCulloch, C. H. Smith.

Okla., Oklahoma City—Anderson-Prichard Oil Corp., increased capital from \$100,000 to \$250,000.

Okla., Ponca City—Operators Gas and Water Co., inceptd. by T. W. Prentice, M. P. Long and H. P. Luce.

Okla., Tulsa—For full details see Land Developments.

Tenn., Gallatin—Gillespie Oil Corp. will construct oil refinery.

Tex., Fort Worth—Herbert Oil Co., capital \$10,000, inceptd. by Chan. C. Mason, B. L. Stanley, John B. Herbert.

Tex., Houston—Friendswood Oil Co., inceptd. by D. S. Cage, E. D. Altemus, W. T. Smith.

Tex., Houston—Newton & Gilchreas, Inc., capital \$35,000, inceptd. by R. H. Newton, Arthur Gilchreas, Homer Ludiker.

Tex., Mirando City—Tex-Pata Pipe Line Co., Oliver W. Killam, Pres., will construct refinery with dairy capacity of 2000 bbls. oil.

Tex., Port Arthur—Gulf Refining Co., Geo. H. Taber, V. P., will expend about \$12,000,000 in improvements and extensions to refinery; work will consist of 1000 ft. concrete wharf and accessories; can mfg. and grease mfg. and compounding plant, covering 100,000 sq. ft. floor space; additional water supply capacity amounting to 100,000,000 gals. daily with pumping capacity of 50,000,000 gals. daily; steam plant of 6000 H. P.; power plant of 10,000 K. W.; additional sulphuric acid plant of capacity of 100 tons daily; 94 oil stills, including extension to aluminum chloride process of mfg. gasoline; 200 steam and electric pumps; 66 tanks with capacity of 500,000 bbls.; construction begun. (Lately noted.)

Tex., Singleton—Navasota Oil Co., capital \$30,000, inceptd. by Paul Freeman, J. T. Swanson, J. F. Mitchell.

Tex., Waco—Texas Toll Line Co., increased capital to \$100,000.

Tex., Wichita Falls—Mintex Oil Corporation, capital \$20,000, chartered by R. T. Orth, C. A. Steelsmith, G. C. Woodruff.

Va., Clifton Forge—Standard Gas & Oil Supply Co., Inc., increased capital to \$150,000.

Ice and Cold-Storage Plants.

Fla., Lake City—For full details see Sewer Construction.

Ga., Juliette—Juliette Milling Co., will erect ice plant at Glovers.

Md., Baltimore—Baltimore Ice Mfg. Co. have acquired 60 by 165 ft. site at 409 Asquith St. to establish ice mfg. plant, estimated capacity 125 tons daily; G. Aubrey Beard, 23 City Hall, interested.

S. C., Laurens—Laurens Ice & Cold Storage Co., capital \$40,000, inceptd. with C. F. Fleming, Prest.-Secy. and Treas.; F. H. Caine, V. P.

Tex., Fort Worth—Rock Island Ice Co., increased capital from \$15,000 to \$40,000.

Tex., Kaufman—Kaufman Ice Factory, A. S. Beckner, Propr. has under construction cold storage plant.

Tex., San Antonio—Texas Central Power Co. is having plans prepared by John M. Marriott for three ice stations.

W. Va., Paw Paw—For full details see Miscellaneous Enterprises.

Land Developments.

Ala., Birmingham—Green-Darden Real Estate & Insurance Co., inceptd. with R. P. Darden, Prest.; J. R. Green, V. P.

Ala., Birmingham—Lander-Markin Realty Co., inceptd. F. D. Lander, J. F. Mankin and Charles L. Gandy.

Ala., Birmingham—Inglenook Investment Co., capital \$10,000, inceptd. by S. H. Wallace, T. R. Bently and O. T. Goodwyn.

Ala., Birmingham—Tishomingo Land & Lumber Co., capital \$100,000, inceptd. by Henry C. Powers, George W. Randall and W. R. Young.

Fla., Cocoa—Grant Development Co., capital \$30,000, inceptd. with R. L. Gelger, Prest.; D. St. Clair Nisbet, V. P.

Fla., Daytona—Florida Coast Investment Co., capital \$15,000, inceptd. with R. B. Paccetti, Prest.; L. E. Holmes, Secy.

Fla., Miami—Selden Properties, Inc., capital \$50,000, chartered with Mary W. Nash, Prest.; Clyde Rodgers, Secy.-Treas.

Fla., Orlando—City, Eugene G. Duckworth, Mayor, voted to purchase 35 acres of land for public park.

Fla., Oviedo—Forest Garden Farms, capital \$80,000, inceptd. with E. B. Mendsen, Prest.; P. A. Vans Agnew, Secy.-Treas.

Fla., Tavares—Florida Enterprises Development Co., capital \$35,000, inceptd. with W. M. Igou, Prest.; H. G. Duncan, Secy.

Fla., West Palm Beach—Palm Beach County Investment & Development Co. will develop 8000 acres in fruit trees.

Ga., Atlanta—F. A. Ames, Owensboro, Ky. will develop Virginia Highlands extension, tract of 37 acres for subdivision, will install lights, streets, water, sewers, etc.; expend about \$1,500,000.

Ky., Louisville—Otis & Bruce, capital \$20,000, inceptd. by Helm Bruce, W. Earle and Mary Scott Otis.

Ky., Louisville—Columbia Realty Co., capital \$250,000, inceptd. by Lewis R. Atwood, Joseph Burge and Samuel E. Booker.

La., Jennings—Jennings Realty & Investment Co., capital \$60,000, inceptd. with D. C. Ritchie, Prest.; E. F. Follett, Secy.

La., Jennings—Miss-Lou Planting Co., Inc., capital \$100,000, inceptd. with N. H. Hollfield, Prest.; J. J. Mundell, Secy.

La., New Orleans—Sidney W. Souers, Prest. Mortgage and Securities Co. purchased properties of Deer Range Planting Co., consisting of 2100 acre cane plantation.

Md., Baltimore—L. and H. Realty & Investment Corp., 641 Equitable Bldg., capital \$10,500, inceptd. by Benjamin H. Hartogensis, Meyer Caplan, and Estella M. Brown.

Md., Hagerstown—Wright Realty Co., Inc., 46 W. Franklin St., capital \$10,000, inceptd. by Fred C. Wright, John D. Cassatt, C. Walter Baker.

Miss., Biloxi—For full details see Road and Street Construction.

Miss., Logtown—Inez Fruit & Nursery Co., capital \$25,000, inceptd. H. S. Weston, F. D. Pittman and S. F. O'Neal.

Mo., Kansas City—Kaw Valley Realty Co., inceptd. by E. C. Vencill, N. Gallagher, M. O'Brien.

Mo., Kansas City—A. and R. Realty Co., capital \$50,000, inceptd. by Omar Abernathy, J. A. Robertson, J. T. Harding.

Mo., Kansas City—Kansas City Properties Co., capital \$10,000, inceptd. by P. C. Clark, R. L. Knowles, H. B. Schoofield.

Mo., St. Louis—For full details see Water Works.

Mo., St. Louis—Boody-Goller Realty Co. purchased and will develop 12 acres for subdivision.

Mo., St. Louis—E. Davis Realty & Mortgage Co. will develop Roths Grove as subdivision.

Mo., St. Louis—Lillie V. Shields purchased 105 acres on west side of Link Rd. will subdivide.

N. C., Asheville—Union Development Co., capital \$25,000, inceptd. by Charles French Toms, Jr., Roy P. Jordan, E. J. Randolph.

N. C., Charlotte—Mecklenburg Nurseries, Inc., capital \$50,000, inceptd. by S. A. Ault, of Charlotte, S. R. Howell and Vrebard Howell of Knoxville, Tenn.

N. C., High Point—S. C. Clark, Realtor, retained E. S. Draper, Landscape Archt. and City Planner, 11 E. 5th St., Charlotte, N. C. to plan 40 acre extension to Emorywood development; plans include asphalt streets, curb and gutter, storm drainage, etc.

N. C., Lenoir—J. A. Triplett and associates will develop peach orchard on Cajé's mountain.

Okla., Muskogee—Southwestern Union Realty & Investment Co., capital \$50,000, inceptd. by G. W. F. Sawyer, Chandler, Okla.; George W. Davis, and William Rentie, both Boynton, Okla.

Okla., Tulsa—Sunset Gardens Co., capital \$400,000, A. L. Farmer, Prest.; T. W. MacKenzie, Secy.; C. R. Edmunds, Mgr.; will develop about 200 acres for subdivision; pave, construct sidewalks; install electric and gas system; sewer; water, etc.; erect number of dwellings; Hare & Hare, Archts., Kansas City, Mo.

Tex., Dallas—For full details see Water Works.

Tex., Houston—W. D. Cleveland, John Dixon and associates interested in development of Broadacres for subdivision, 34 acres tract will install underground telephones, light and drainage systems, pave streets, grade terraces, construct sewers, etc.

Tex., Houston—City, Clarence L. Brock, Park Supt. will expend \$70,000 in improvements to parks during 1923.

Tex., Plainview—City has acquired 40 acres and will develop for park and playgrounds. Address The Mayor.

Va., Graham—Dudley Land Co., capital \$75,000, inceptd. with J. S. Dudley, Prest.; George R. Walker, Secy.

Va., Norfolk—Virginia Beach Sea View Corp., capital \$50,000, inceptd. with B. A. Banks, Prest.; Joseph A. Stein, Secy.

Lumber Manufacturing.

Ga., Macon—E. B. Smith reported to have purchased 3000 acres timber land south of Adams Park; will develop.

Ky., Roxana—Geo. Hogg, has saw mill, daily capacity 10,000 ft. lumber and ties. (Lately noted to have purchased additional timber tract, to erect mill.)

Miss., Laurel—Laurel Lumber Mfg. Co., capital \$30,000, inceptd. by O. C. Volckart, W. E. Howard and B. A. Schneider.

N. C., Greensboro—Cherokee Timber Co. acquired timber lands and other property of the Boone Fork Mfg. Co., costing \$775,000.

Okla., Enid—Long-Bell Lumber Co., Bud Everett, Mgr. has plans for rebuilding mill, approx. cost \$75,000. (Lately noted burned.)

S. C., Pamplico—Wagoner Lumber Co., C. B. Wagoner, Prest. has begun construction of 100x200 ft. plant approx. cost \$35,000. (Lately noted burned, loss \$35,000.)

Tex., Forest—Chronister Lumber Co., increased capital from \$300,000 to \$600,000.

Tex., Fort Worth—Kelsay Lumber Co., contemplates establishing planing mill at Lake St. and Rio Grande Ave.

Tex., Houston—Gerner Lumber Co. increased capital to \$80,000.

Tex., Houston—Spinner Lumber Co., increased capital to \$50,000.

Tex., Port Arthur—Port Arthur Planing Mill Co., increased capital to \$40,000.

Metal-Working Plants.

Ky., Louisville—Southern-Flexum Sign Co., capital \$10,000, inceptd. by Delmar J. Ramers, L. D. Wallace and F. M. Turner.

Md., Baltimore—Silverware, etc. — L. F. Grammes & Sons, Inc., 1137 Calvert Bldg., chartered by Frank Rowland Hansel, Albert Gustav Bauer and John Vernon Pimm.

Mo., Kansas City—Newman Oil Burner Co., inceptd. by A. P. Newman, C. D. Payne, A. E. Webb.

Mo., Kansas City—Rolsky Mfg. Co., capital \$50,000, inceptd. by Emanuel Rolsky, Max Eichenberg, and Hyman Spitcaufsky; mfrs. refrigerators, etc.

Mo., St. Louis—Deko Electrical Supply Co., capital \$30,000 inceptd. by Joe and Nettie Silverman, Isador Cassel.

W. Va., Huntington—Radio Outfits—J. F. Peck interested in organizing \$60,000 company, to mfr. radio outfits with or without aeriels.

Mining.

Ky., Carter—Ashland Limestone Co., M. E. S. Posey, Mgr., and Const. Engr., Box 668, Ashland, Ky. has 100 acres under development, daily output 2000 tons; has mchy. except power house; will probably purchase boiler, generator, engine and motor. Lately noted. (See Mchy. Wanted—Boiler; Generator; Engine; Motor.)

Tenn., Jamestown—T. L. Morgan Mining Co., Inc., capital \$10,000, chartered with D. C. Yates, Will R. Stone, W. Praines.

Tex., Waco—Waco Lime & Products Co., capital \$400,000, organized with B. F. Litsinger, Prest.; Baltimore, Md., Jno. L. Spurlin, Sr., Secy., Waco; has under construction stone crushing plant, also 100 ton daily capacity plant with a hydrator of sufficient capacity to increase to 200 tons, contract for latter let to Schaffer Engineering & Equipment Co., Pittsburgh, Pa.; changed name from Koury Calcium Co. of McGregor, Tex.

Miscellaneous Construction.

Fla., Jacksonville—Incinerators—For proposal details see Mchy. Wanted—Incinerator.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fla., Jacksonville—For proposal details see Mchy.-Wanted—Disposal Plant.

Fla., Miami—Channel—City, H. E. Ross, Clk., votes March 20 on \$100,000 bonds for deepening channel and turning basin of city's harbor.

Fla., Miami—Incinerator—City, H. E. Ross, Clk., will vote March 20 on \$40,000 bonds for construction of incinerators.

La., Baton Rouge—Dock—For full details see Sewer Construction.

La., New Orleans—Levee — New Orleans Levee Board, C. J. Donner, Secy. will build new river protection levee known as Couret & Stanton levee; involving 175,000 cu. yds. earth; approx. cost between \$40,000 and \$50,000; bids opened.

Miss., Vicksburg—Seawall—City, will vote within next two months on \$125,000 bonds as the city's share of the expenditure of between \$250,000 and \$340,000 for the erection of seawall, installation of pumps, etc. Address The Mayor.

Mo., Clayton—Bank Protection—St. Louis County River Improvement Assn., Bente Hockstra, Prest. plans constructing bank protection from Centaur to a point a short distance above St. Charles.

N. C., Asheville—Beaver Lake, Inc., capital \$100,000, chartered by J. A. Sinclair, P. R. Moale and Fred L. Sale.

Tex., Beaumont—Wharf—City Wharf and Dock Comsn. approved plans for extension of system, work includes 1500 ft. of additional wharf, and another warehouse; approx. cost with necessary dredging \$300,000. R. Fullweiler, City Engr. (Previously noted.)

Tex., Galveston—U. S. Quarantine Station—For proposal details see Mchy. Wanted—Wharf Repairs. etc.

Tex., Galveston—Channel — U. S. Engrs. opened bids for dredging 16 ft. channel across Point Isabel bay to Brazos de Santiago Pass on Padre Island, about 3 mi.; bidders are United Dredging Co., at \$225,600 and Jacob Jacobson, Marshalltown, Iowa at \$154,000.

Tex., Port Arthur—Wharf—For full details see Gas and Oil Enterprises.

Va., Newport News—Elevator—Chesapeake & Ohio Ry. Co.—For full details see Railway Shops, Terminals, Roundhouses, etc.

Miscellaneous Enterprises.

Fla., Altamonte Springs—Royal Fern Corp. let contract to Cornell-Mathews Co., Christ Bldg., Orlando, Fla. to install refrigeration plant and pre-cooling room; has also purchased 5 ton compressor and for insulation material let to Union Fibre Co., Winona, Minn.

Fla., Miami—Magic City Paint Co., capital \$30,000, inceptd. with Francis M. Miller, Prest.; Nellie McNeff, Secy.-Treas.

Fla., Miami—Fire Alarm System—City, H. E. Ross, Clk., will vote March 20 on \$75,000 for fire alarm extension and high pressure system.

Ga., Gainesville—W. M. Brice, 6½ N. Bradford St. (lately noted to remodel plant) will install type setting machine, self feeder press, punching machine, wire or thread stitcher for commercial job printing plant; bids until April 1; probably install daily paper later. (See Mchy. Wanted—Printing (Job) Plant Equipment.

Ky., Lexington—Producing Dairy Co., capital \$30,000, inceptd. by W. S. Anderson, H. E. Coons and C. L. Bailey.

Ky., Louisville—Printer's Composition Co., capital \$12,000, inceptd. by Frank L. Spurgin, C. F. Breckel and P. F. Sutterlin.

Ky., Louisville—Argonne Apartment House

Co., capital \$100,000, inceptd. by J. T. Stinson, C. E. McMahon and R. K. Walker.

Ky., Louisville — Steamship Line—Louisville & Cincinnati Packet Co. will expend \$750,000 for new equipment and improvements for year 1923.

La., Lafayette—Lafayette Advertiser, let contract to Herman Oliver, Lake Charles, La. to erect brick building, estimated cost \$10,000.

Ky., Owensboro—Owensboro Hotel Co., capital \$200,000, inceptd. by Geo. S. Wilson. Arch Bamberger, J. H. McKinney.

Md., Baldwin—Long Green Farmers and Truckers' Co-operative Assn. of Baltimore County, Inc., capital \$25,000, chartered by Joshua Lynch, John M. Prigel and Henry F. Emmel.

Md., Baltimore—Laundry—Archers Laundry, Howard and Mulberry Sts. will erect \$500,000 plant 150 ft. on Eutaw, 242 ft. on St. Marys St., 103 ft. on McCulloh St., extending diagonally back to Eutaw St.; about 75,000 sq. ft. floor space; 3 stories; fireproof; concrete construction; glazed terra cotta front; steam heat; electric power and lighting plant; install new equipment in power plant and new laundry machinery in addition to some old equipment; J. K. Stack, Archt., 308 E. Lafayette Ave.; estimates ready for bids in about 3 weeks.

Md., Baltimore—Baltimore Gas Engineering Corp., 1119 Fidelity Bldg., capital \$600,000, chartered by R. Bennett Darnell, Edward H. Hammond and Charles F. Yaeger.

Md., Baltimore—Central Transfer Co., Fidelity Bldg., capital \$20,000, inceptd. by Allen W. Owens, J. Milton Reynolds and John M. Sommer.

Md., Baltimore—Lake Apartment Co., 719 W. Lombard St., capital \$200,000, inceptd. by Bernard M. Oberdorfer, Mollie G. Sadler and Coulson C. Hendrix.

Md., Baltimore—Morris Schapiro, 110 Commerce St. acquired manufacturing properties and equipment of Baltimore Pearl Hominy Co. at Howard, Sharp and Stockholm Sts.

Md., Baltimore—Fire Fighting Equipment—Board of Awards, Wm. F. Broening, Prest. let contract to Fabric Fire Hose Co., 127 Duane St., New York at \$37,700 for 38,750 ft. new gum and wax treated fire hose.

Md., Salisbury—Salisbury Fair Assn., Inc., chartered by David J. Ward, Walter R. Miller, S. King White and others.

Mo., Kansas City—Fisher Building Co., capital \$50,000, inceptd. by H. E. Fisher, L. G. Johnson, L. C. McDonnell.

Mo., St. Louis—Fire Equipment—For full details see Water Works.

Mo., Springfield — Lohmeyer Undertaking Co., Mrs. Lohmeyer, Prest., has expended \$10,000 on branch establishment at 534 St. Louis St.

N. C., Charlotte—Kirby Poster Advertising Co., capital \$10,000, inceptd. by W. C. Kirby, Charlotte; G. R. Freeman, Norwood and others.

N. C., Henderson—Construction—Patterson Carter Co., inceptd. with A. D. Patterson Prest.; D. Carter, V. P.-Treas.

N. C., Reidsville—Charles A. Penn, V. P. American Tobacco Co., will double capacity of cigarette plant; will install 100 cigarette machines, increasing capacity to 120,000,000 cigarettes weekly.

N. C., Sanford—Express Publishing Co., capital \$10,000, inceptd. by P. H. and V. L. St. Clair, V. B. Buchan; to take over The Sanford Express.

Okla., Durant — Southeastern Publishing Co., inceptd. by Frank M. Dodge, Bokchito, Okla.; G. B. Stone, Caddo, Okla.; W. W. Dodson, Matey, Okla.

Okla., Oklahoma City—Oklahoma City Undertaking Co., inceptd. by J. J. Dawson, Jr., K. C. Thomas, Ed. Mason.

S. C., Florence—Florence Printing Co., increased capital to \$30,000.

Tenn., Nashville — Bottling — Consumers Water Co., Carl Howard, Prest., will increase capital to \$100,000; will install additional mchy. at plant at 909 Commerce St.

Tex., Beaumont—Jefferson Amusement Co., capital \$50,000, inceptd. by S. E. Gordon, J. C. and T. R. Clemons.

Tex., Dallas—Universal Advertising Corp., capital \$10,000, chartered by C. H. Wrightman, Roy and J. B. Simpson.

Tex., Dallas—Texas Publishing House, capital \$100,000, inceptd. by Ellis, Travis and Bertha Craig Campbell.

Tex., Dallas—Porter Mfg. Co., capital \$22,000, inceptd. by Albert Kramer, John Wilkins and J. B. Stilter.

Tex., Dallas—Independent Film Service Co., capital \$30,000, inceptd. by J. W. Williams, J. M. Walsh and E. C. Biessli.

Tex., Fort Worth—High Hardware Co., increased capital to \$20,000; changed name from H. J. High Hardware Co.

Tex., Fort Worth—D. Dixon Motion Picture Productions, organized with R. H. Pearson, Prest.; C. E. Gillham, Treasurer; and H. B. Hardin, Secretary; will erect complete studio.

Tex., Fort Worth—Fort Worth Builders' Supply Co., capital \$10,000, inceptd. by A. W. Flynt, F. D. Henderson and P. S. Phillips.

Tex., Galveston — Lallier Steamship Co., capital \$25,000, inceptd. by F. A. Lallier, A. S. Gladwin and John Hurley, Jr.

Tex., Galveston—Gulf Coast Marine Supply Co., capital \$201,000, inceptd. by W. H. Gilman, A. S. Sheperd and G. S. Anderson.

Tex., Haskell—Haskell Laundry Co., capital \$7500, inceptd. by E. Cox, Emery Menefee and R. C. Montgomery.

Tex., Houston—W. L. Pearson & Co., increased capital from \$22,000 to \$45,000.

Tex., Houston—Transportation — T. R. Rogers, Inc., capital \$20,000, inceptd. T. R. Rogers, F. U. Tatman and R. Book.

Tex., San Antonio—San Antonio Transfer Storage & Auction Co., inceptd. by W. W. Fullian, D. E. Rott and W. H. Kennon.

Va., Ballston—Fire Equipment—For full details see Water Works.

Va., Christianburg—Old Dominion Corp., organized with M. C. Miller, Prest.-Mgr.; R. Floyd Smith, Secy.; general contractors. (Lately noted inceptd., capital \$100,000.)

Va., Coeburn—Coeburn Printing Corp., capital \$10,000, inceptd. with H. I. Horn, Prest., Tacoma, Va.; V. B. Tate, Secy., Coeburn.

Va., Richmond—Printing, etc.—L. P. Levy Co., capital \$25,000, inceptd. with L. P. Levy, Prest.; Frank Levy, Secy.

Va., Richmond — Robert Downing Film Corp., capital \$50,000, chartered with Robert L. Downing, Prest.; Walter P. Klein, Secy.

W. Va., Paw Paw—Storage Plant—H. W. and L. P. Miller, and others will erect apple storage building, also plans erecting ice mfg. plant; purchased site.

Miscellaneous Factories.

Ala., Birmingham—Dairymens' Co-operative Assn., S. L. Brewster, Chrmn. let contract to G. W. Acton, for erection of \$55,000 milk station at Twenty-eighth St. and Seventh Ave., North.

Ala., Birmingham—Sanitary Chemical Products Co., capital \$10,000, inceptd. by F. T.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

21st St., Eli B. Witt, Prest. let contract to Bell and others.

Fla., St. Petersburg—N. W. Parker, Prest. of Coca-Cola Bottling Building Works, will erect 2 story, brick and tile; cor. Seventh St. and Central Ave. cost \$12,000.

Fla., Tampa—Havatampa Cigar Co., 2007 B. E. Neeld, 1722 Hills Ave., Tampa, for construction of plant; 45x90 ft.; 4 stories; ordinary construction; sprinkler system; cost about \$25,000. (Lately noted.)

Ga., Atlanta—Bottles—Atlanta Glass Mfg. Co., has site on Miller Reed Ave. and will construct bottle mfg. plant.

Ky., Cynthiana—George Hoskins Co., capital \$25,000, inceptd. by George Hoskins, Ewing A. Flynn and others.

Ky., Hopkinsville—The Elk Brand Shirt & Overall Co., let contract to Jack Cole of Paducah for construction of brick and stone factory on South Campbell St.

Ky., Poor Fork—Cumberland Baking Co., capital \$35,000, inceptd. by Frank Jacobucci, Poor Fork, George H. Reuhlmann and John Schaefer, both Cincinnati, O.

La., Monroe—Calcium Arsenate—Boll Weevil Insecticide Co., Dr. J. G. Birchett, Prest.; Francis E. Goodwin, Secy.-Treas., has building and will improve for mfr. of calcium arsenate; factory will also include its own acid plant and will make its own packages; cost about \$250,000; present headquarters are at Paragould, Ark. (Lately noted.)

Md., Baltimore—Confectionery — J. E. Schaeffer & Son, Co., 103 W. Lombard St., capital \$25,000, inceptd. by W. W. Horne, Howard G. Schaeffer, James A. Clark.

Md., Baltimore—Bon Ton Cake Co., 2613 N. Charles St., capital \$10,000, inceptd. by J. LeRoy Hopkins, Ferdinand I. Gruebel, Annabel Keppler.

Md., Baltimore—Paints, etc.—George W. Habbersett, Inc., 327 N. Howard St., capital \$50,000, chartered by George W., William C. and Louisa V. Habbersett.

Md., Baltimore—Newton Shoe Corp., 117 S. Paca St., capital \$50,000, chartered by Harold N. House, Elizabeth Hammer, Emilie Sturman.

Md., Baltimore—Cash & Carry Tobacco Co., 922 Equitable Bldg., capital \$100,000 inceptd. by James Horn, Albert Steinberg, Benjamin Beck.

Md., Baltimore—Wool—Henry Marcus & Son, Inc., 220 S. Charles St., increased capital to \$400,000.

Md., Baltimore—Bond Cloak & Suit Co., 821 E. Baltimore St., capital \$25,000, inceptd. by Michael M. Scherr, Samuel Cohen, Melvin H. Naimen.

Md., Baltimore—Guilford Shoe Co., Inc., Eager and Forest Sts., capital \$100,000, incorporated by Simon Levinson, Archibald Sykes, Sylvan H. Lauchheimer.

Md., Baltimore—Gaver Drug Co., 701 N. Howard St., inceptd. by Gaither C. and Oren H. Gaver, Benjamin K. Kriger.

Md., Hagerstown—Van Lin Shoe Co., 55 E. Washington St., capital \$100,000, inceptd. by John Linder, W. Jackson Kauffman and Walter G. Brandle.

Miss., Brookhaven—Brookhaven Coca Cola Co., capital \$15,000, inceptd. by A. B. Freeman, W. V. Johnson and others.

Mo., St. Charles—International Shoe Co. will erect building Cor. Fifth and Pike Sts.

Mo., St. Louis—Interstate Electric Co., lately noted inceptd. with \$20,000 capital, organized with Chas. Jehle, Jr., Prest.; James C. Grindell, V. P., 405 Laclede Ave.; Homer Dodson, Secy. has plant with daily

output of 50 battery charges for radio and auto batteries.

Mo., St. Louis—Pierce Mfg. Co., capital \$25,000, inceptd. by R. E. Pierce, W. H. Hanse and W. J. Hefe.

N. C., Asheville—Nichols Manufacturing Co., capital \$25,000, inceptd. by Charlie J. W. Nichols and Rufus G. Buckner.

N. C., Gastonia—Laughridge Tobacco & Candy Co., capital \$50,000, inceptd. by A. L. Laughridge, H. J. Weinberg and E. J. O'Call.

N. C., Henderson—Patterson Carter, Inc., capital \$10,000, chartered by A. D. Patterson, C. L. Carter.

N. C., Horse Shoe—Horse Shoe Co-Operative Cheese Factory, Palmer McCray, Mgr., will erect cheese plant.

N. C., Mooresville—Kelly Clothing Co., capital \$200,000, inceptd. by J. P. Mills, C. L. Kelly.

N. C., Salisbury—W. D. Mann Co., capital \$100,000, inceptd. by W. D. Mann, T. F. Wright, and J. M. Carlton.

N. C., Shelby—Shelby Creamery, Wm. Lineberger, Secy.-Treas., has site on N. Washington St. and will construct building for creamery; will install churns, boilers, 6 ton refrigerating plant, etc.

N. C., Valdese—Valdese Shoe Co., capital \$100,000, inceptd. by John Ponds, F. Garron and John Long.

N. C., Winston-Salem—Mrs. W. F. Flake, Inc., capital \$10,000, chartered by Mrs. W. F. Flake, H. Tracy Odum and John H. Cornelius.

Okla., Chickasha—Whirl-Over Swing Co., capital \$25,000, inceptd. by W. W. Horne, T. H. Williams and Jonas Cook.

S. C., Rock Hill—Rock Hill Baking Co., capital \$15,000, inceptd. with Geo. A. Howell, Jr., Prest.-Treas.

Tenn., Chattanooga—Casey-Hegdes Co., will erect \$27,000 addition to plant on Whiteside St.

Tenn., Chattanooga—Brook Candy Co., W. E. Brock, Prest. will construct 5 story addition to candy plant; brick and mill construction; approx. 40,000 sq. ft. floor space; 73x90 ft.; plans by C. E. Bearden, Archt.

Tenn., Knoxville—Little Bros., 118 W. Jackson Ave. will erect 3 story, brick addition to building.

Tenn., Memphis—Anna Chemical Co., capital \$10,000, inceptd. by T. S. Adamson, J. B. Nichols and W. E. Anyett.

Tenn., Memphis—O-Cedar Mills Co., capital \$100,000, inceptd. by N. B. Greenleaf, J. S. Allen and W. D. Kyser.

Tex., Abilene—Abilene Mfg. Co. increased capital to \$25,000.

Tex., Breckenridge—J. W. Hassell and associates interested in erection of plant for manufacture of carbon black from residue gas from gasoline plants in Stephens county, together with machine shops, tool shops, warehouses, workmen's quarters, pipe lines, tramways, etc.; cost about \$300,000; plant will burn about 9,000,000 cu. ft. gas daily.

Tex., Dallas—West Coast Kalsomine Co., capital \$10,000, inceptd. by Q. C. Taylor, J. H. Gardner, J. G. Penniman.

Tex., Dallas—Globe Mfg. Co., capital \$15,000, inceptd. by A. L. Ayers, P. J. Arlund, W. C. Irwin.

Tex., Houston—Texas Creamery Co. will construct addition to plant; cost \$25,000.

Tex., Houston—Disinfectants—Pine-O-Pine Co., capital \$50,000, inceptd. by John Popperman, T. C. Dunn, Jr., I. S. Handy.

Tex., Longview—Rembert Paint Co., capital \$10,000, inceptd. by E. B. Rembert, T. J. Elridge, Carter Otey.

Tex., San Antonio—Busto Bottling Works, inceptd. by Ed Seideman, M. S. Koch, Wm. Rockas.

Tex., Texas City—Texas Sugar Refining Co., let contract to Jourbert & Goslin, Birmingham, Ala., for refining machinery, melters, filtering machines and other mechanical apparatus; first unit to have capacity of 1,000,000 lbs. sugar daily. (Lately noted.)

Va., Culpeper—Culpeper Creamery Co., Geo. M. Shelor, Secy., has building and invites bids on ice mchy., ice cream equipment, butter making equipment, motors, shafting, pulleys, etc.; cost \$5000. (See Mchy. Wanted—Ice Mfr. Machinery; Motors; Ice Cream Equipment; Pumps, etc.)

Va., Lexington—McCrum Drug Co., Inc., increased capital to \$50,000.

Va., Richmond — Universal Laboratories, Inc., capital \$600,000 inceptd. with A. J. Davis, Prest.; D. D. Whitehead, Secy.

Va., Richmond—Tissue Paper—The Wortendyke Mfg. Co. have had plans prepared for erection of addition to plant at foot of Thirteenth St.; 6 stories; will soon invite bids.

Va., Roanoke—Roanoke Drug So., Inc., increased capital to \$300,000.

W. Va., Keystone—Kash & Hoover Drug Co., capital \$25,000, inceptd. by N. B. Kash, C. B. Hoover, T. H. Phillips.

Motor Cars, Garages, Tires, Etc.

Fla., Eustis—Eustis Motor Co., capital \$100,000, inceptd. with George R. Williams, Prest.; H. R. Scott, Secy.-Treas.

Fla., Miami—Read & Randel Motor Co., capital \$10,000, inceptd. with H. Randel, Prest.-Treas.; F. Randel, Secy.

Ky., Fort Thomas—Highland Auto Garage, increased capital to \$100,000.

Ky., Louisville—Automobile—Co-Rim Corp., capital \$500,000, chartered by Val Lachemalle, F. E. Balcom and B. F. Hardesty.

Md., Baltimore—Fox Motors, Inc., 1119 Cathedral St., capital \$100,000, inceptd. by Lewis and Myer Fox, David P. Milliman.

Miss., Wyatt—Garage—Freeman & Son let contract to J. W. Steward to erect 40x60-ft. garage and repair shop building; install mchy., all purchased. (Lately noted.)

Mo., Columbia—Garage—Allton Bros. will improve garage; plans by Simon Construction Co.

Mo., St. Joseph—Wolfley Automobile Co., capital \$150,000, inceptd. by C. D. Wolfley, A. F. Allen, G. O. Gullikson.

Mo., St. Louis—South Side Auto Supply Co., capital \$25,000, inceptd. by O. F. Fischer, Leo Huff and others.

Mo., St. Louis—Motor Oil Co., inceptd. by A. L. Basch, R. S. Blackshaw, John Burneson.

Mo., St. Louis—Herkert Oil Refiners Sales Co., capital \$10,000, inceptd. by Theo. Herkert, A. S. Radcliff, J. P. Dillon.

Mo., Trenton—Garage—Trenton Buick Co. plans erecting 2 or 3 story garage building.

N. C., Durham—Banner Motor Co., capital \$50,000, inceptd. by J. T. Salmon, C. M. Warlick and C. C. Woods.

N. C., High Point—Filling Station—Fred Barbee contemplates erecting filling station at Montlieu and Centennial Aves.

Okla., Cushing—O. K. Vulcanizing & Supply Co., capital \$25,000, inceptd. by Ross M. Winans, J. B. McKinley and C. C. Sitterly.

S. C., Conway—Cooper Motor Co., inceptd. with J. B. Cooper, Prest.; T. B. Cooper, Jr., Secy.-Treas.

Tenn., Memphis — Automobile—Ames-Built Sales Co., capital \$10,000, inceptd. with T. J. and W. B. Wise, Lucy Morris.

Tenn., Memphis—Joe Bennett Auto Laundry Co., incptd. by Joe Bennett, Ernest Hanna and I. D. Johnson; have leased 2 story building at 290 Monroe St., remodel for automobile laundry, to wash and polish cars.

Tex., Alpine — Highway Service Station, capital \$10,000, incptd. by G. W. Baines, Jr., W. D. Burchan, T. F. Skevington.

Tex., Dallas—Helois Gasoline Co., increased capital to \$100,000, changed name from Brown Gasoline Co.

Tex., Dallas—Stephens Texas Motor Co., capital \$30,000, incptd. by T. A. Helm, G. E. O'Brien and others.

Tex., Dallas—Chevrolet Motor Co. will occupy 150x100-ft., 4 story building on Commerce and College Ave., costing \$125,000; to be erected by Milam-Fife-Connor Investment Co.; Hughes-O'Rourke Construction Co., Contr.; Lang & Witchell, Archts.

Tex., Houston—Accessories—Battery Service Co., Inc., chartered by L. W. Hutchins, J. L. Heit and S. Hutchins, Jr.

Tex., Littlefield—Littlefield Auto Co., capital \$15,000, incptd. by J. M. Shields, R. J. and C. D. Smith.

Tex., Orange—Orange Motor Co., capital \$25,000, incptd. by L. A. MacDonalds, C. H. Glascock and H. V. Gudger.

Tex., San Angelo—Allen Motor Sales Co., capital \$40,000, incptd. by W. C. Allen, E. S. Noble and F. B. Alken.

Tex., Wichita Falls—W. S. Auto Supply Co., capital \$10,000, incptd. by J. H. Fletcher, E. Shack and Wesley Beck.

Va., Victoria—Jones & Lewis Motor Co., Inc., capital \$25,000, chartered with H. E. Jones, Prest.; Sterling G. Hawthorne, Secy.

W. Va., Huntington—Bruce Perry Motor Co. will occupy 3 story, 160x60 ft. brick building on 4th Ave.; erected by C. L. Ritter; Sidney L. Day, Archt.

W. Va., Logan—Automobiles—Logan-Paige Corp., capital \$25,000, chartered by D. L. Holland, L. C. Widener, J. Carey Alderson.

Railways.

Ala., Anniston—Alabama Great Southern Railroad, (Southern Railway System), is reported to have let contract to the Goodrich Construction Co., of Anniston, to build 20 mi. of roadbed between Woodstock and Centerville, Ala., the estimated cost of which is \$183,709. A. A. Woods is Chief Engr. Southern Railway Co., Cincinnati, O.

Ark., Charleston—Charleston & Northeastern Railway Co., chartered, capital \$100,000, to build a line from Charleston to or near Dahoma, Ark., about 5 mi. Incorporators: G. Wallen, J. L. Lake, H. E. Smith, Joe Yunker, and J. S. Smith.

Fla., Orlando—Prest. J. F. Ange of the Canaveral, Orlando & Southwestern Railroad Co., writes to the Manufacturers Record: "We are going to build 175 miles of standard gauge steam railroad and will be in the market for rails and other equipment." Press reports state that the line will reach from Cape Canaveral on the Atlantic coast to Orlando and thence to Sanford, Groveland, Haines City, Sebring, Lakeland and Plant City.

N. C., Fayetteville—Cape Fear Railways, Inc., proposes to extend its line from Fayetteville to Hope Mills, 8 mi.; also from Fort Bragg to Manchester, about 7 mi.; and from a connection with the main line to Skybo, 2 1/4 mi. C. F. Harris, Raleigh, N. C., is Treasurer and General Manager.

S. C., Chester—Survey for a contemplated extension of the Catawba Valley Railroad

from Great Falls, to Rocky Creek station of the Southern Power Co., 3 1/2 mi. has been made by engineers of the latter.

Tenn., Jellico—Jellico Creek Railroad Co. proposes to build a line 8 mi. long. Black, McKenney & Stewart, 618 Seventeenth St., N. W., Washington, D. C., are the consulting engineers.

Tex., Houston—Gulf Coast Lines, C. S. Kirkpatrick, Chf. Engr. plans expending \$1,000,000 on track and roadbed improvements in Texas and Louisiana during 1923.

Railway Shops, Terminals, Round-houses, Etc.

Ala., Birmingham—Illinois Central R. R. Co., F. L. Thompson, Chief Engr., Chicago, Ill., plans expending \$45,500,000 during year 1923 on improving and extending its facilities, including additional main tracks, grade reductions, improvement and extension of yards, locomotive and car shops, freight and passenger terminals, new shop mchy. and tools, extension of signal facilities; new equipment includes 50 locomotives, 4000 open top cars, 1500 box cars, 500 automobile cars, 50 all steel passenger and baggage cars, 5 dining cars and 125 caboose cars.

Tex., El Paso—El Paso & Southwestern R. R. Co., J. L. Campbell, Chf. Engr. will expend \$290,000 for improvement during 1923 including the following: will extend round-houses, adding 10 new stalls, approx. cost \$75,000; enlarge coach shed at cost of \$15,000 and other work of the system.

Va., Newport News—Chesapeake & Ohio Ry. Co., F. I. Cabell, Chief Engr., Richmond, Va., will expend about \$8,000,000 on the following authorized improvements: erect \$1,000,000 elevator to supplement the present structure; build coal pier and necessary equipment, approx. cost \$3,000,000; to purchase 2500 and rebuild 3000 freight cars, for which contract is let; purchase 19 new locomotives and improve freight handling facilities. (Previously noted.)

Road and Street Construction.

Alabama—Jefferson County Board of Revenue, will build 4 roads. For proposal details see Mchy. Wanted—Road Construction.

Ala., Auburn—City let contract to Keenan & Kyser, Selma, Ala., to pave sidewalks; estimated cost \$20,000.

Ala., Montgomery—J. L. Cobbs, City Treas., receives bids until March 6 to lay granite curbing, surface gutters, and install storm sewerage on 1st St., from Walnut to Mulberry.

Ark., Camden—Board of Commrs., Camden Paving Dist. No. 2, D. V. Snow, Secy., let contract to Chas. L. Besler, Wichita, Kansas at \$60,000 for street improvement; 5-in. concrete base with 2-in. asphalt wearing surface (Lately noted.)

Ark., Little Rock—For proposal details see Mchy. Wanted—Paving and Sewer Construction.

Fla., Coconut Grove—City will construct street, sidewalk and other improvements; will vote on \$200,000 bond latter part of March; City Attorney F. L. Knight.

Fla., Dade City—For full details see Water Works.

Fla., Gainesville—For full details see Sewer Construction.

Fla., Miami—F. H. Wharton, City Mgr., plans letting contracts in May for following improvements: asphalt paving, \$400,000, macadam paving (penetration), \$400,000, sidewalks paving, \$75,000; storm sewers, \$200,000, sanitary sewers, \$200,000. (Lately noted.)

Fla., Miami—City, H. E. Ross, Clk., votes

March 20 on \$75,000 bonds for extending and widening streets.

Fla., Pensacola—For proposal details see Mchy. Wanted—Paving.

Fla., Punta Gorda—Charlotte County plans completing Tamiami Trail through County; voted \$250,000 bonds. Address County Commrs.

Fla., St. Petersburg—For proposal details see Mchy. Wanted—Paving.

Fla., West Palm Beach—Greynolds & Monroe received contract to rock and oil Broadway in subdivision of Norwood, to be 75 ft. wide, with parking space on each side, connecting with Dixie Highway.

Ga., Atlanta—For full details see Land Developments.

Ga., Jackson—State Highway Dept., Atlanta, Ga., plans improving Griffin road, from Spalding County line to Jackson; sand-clay construction; will also build concrete bridge across Towaliga River; \$30,000; half to be paid by Butts County, and half by State Highway Dept.; E. H. Davis, Dist. Engr., Griffin, Ga.

Ga., Savannah—For proposal details see Mchy. Wanted—Paving.

Kentucky — State Highway Comsn., will build 7 sections of roads. For proposal details see Mchy. Wanted—Road Construction.

Ky., Ashland—Grayson Road Corp., let contract to Tri-State Construction Co., for grading and street improvements in city and Grayson Road Addition; reinforced concrete curb and gutter.

Ky., Bardwell—Carlisle County will improve roads; voted \$300,000 bonds. Address County Commrs.

Ky., Hazard—Perry County Commrs. will build 6 mi. of the Ky.-Va. highway. Invite bids.

Ky., Henderson—Henderson County plans expending \$75,000 to build roads; Elmer Hopkins, County Road Engr.

Ky., Pikeville—For proposal details see Mchy. Wanted—Paving.

Ky., Whitesburg—Letcher County Commrs. will construct 2 mi. of road between Blackey and Marian, 2 mi. between Ermine and Colly, and 2 mi. between Millstone and Millstone Creek. Invite bids.

La., Baton Rouge — For full details see Sewer Construction.

La., Colfax—For proposal details see Mchy. Wanted—Road Construction; Gravel.

La., Covington—Louisiana Highway Commissioners, Raymond Bldg., Baton Rouge, La., let contract to Hampton Reynolds, New Orleans at \$121,298.43 for grading and shell surfacing 6.12 mi. Gulf Coast Highway from Rigelets to Sildell, St. Tammany Parish, F. A. Proj. No. 126 A. (Lately noted.)

Md., Baltimore—Board of Awards, Wm. F. Broening, Mayor, received low bid from American Paving & Contracting Co., Montebello, Baltimore, at \$78,588.50, to surface portions of 7 streets, with sheet asphalt, as follows: Clarendon Ave., from Curved Blvd. to point north of Kathland Ave.; Cottage, from Violet to Keyworth; Pulaski from Presstman to Baker; Mariwent from Clarendon to Hillsdale road; Ethland from Forest Lane to Curved Blvd.; Woodbine from Liberty Heights to Haddon; Blythwood Road from Charles St. Ave. to Wyndhurst.

Md., Baltimore—City, Chas. F. Goob, Highways Engr., plans widening roadbed of North Ave., 24 ft. from Charles St. to Greenmount Ave.

Md., Baltimore—State Roads Comsn., 601 Garrett Bldg., plans paving Greenmount Ave., from Belair Market to 42nd St.

Miss., Belzoni—City plans extending Central St. through Green Grove Baptist Church property. Address The Mayor.

Miss., Belzoni—City will receive bids for about 14,000 sq. yds. paving; also will lay concrete walks. Address The Mayor.

Miss., Belzoni—Humphreys County, Board of Supvrs., let contract to John Gerkins & Co., Pensacola, Fla., at \$201,366.78, for 7 mi. concrete road from Sunflower County line north of Isola, toward Belzoni, and at \$16,744.50, for Isola Bridge.

Miss., Biloxi—City Comsn. plans improving streets and roadways, sewerage, parks and playgrounds, buildings, etc.; voted \$550,000 bonds. (Lately noted.)

Miss., Greenwood—Leflore County contemplates building highway north from Greenwood across Tallahatchie River to Tallahatchie County road system near Philipp, through Craigsides, Money, and Ruby; Abbott Engineering Co., Engr., Greenwood. Address County Commrs.

Miss., Jackson—Walter A. Scott, Mayor, will improve streets, build bridges, construct drainage improvements, etc.; will vote Apr. 14 on \$175,000 bonds.

Miss., Vicksburg—For proposal details see Mchy. Wanted—Road Construction.

Missouri—State Highway Dept., Jefferson City, Mo., let contracts for 2 roads, Newton Co., 4.871 mi. road from Neosho to Arkansas State line, State Proj. Rt. 1. Sec. 106, to Jno. P. Woltenborger, Neosho, Mo., at \$52,524.68; Dent County, 0.284 mi. road from Salem to Licking, Proj. Rt. 32, Sec. 4, to Illinois Steel Bridge Co., St. Louis, Mo., at \$19,025.82.

Mo., Carthage—City, Ernest Glenn Engr., let contract to Henry Kost, Joplin, Mo., at \$7479.15 to pave Howard Ave. from Chestnut St. to Grand Ave. (Lately noted.)

Mo., Chillicothe—City will receive bids soon for following street improvements: reconstruct Webster from Elm to Jefferson, and Jackson from Washington to Dickinson; resurface Vine from Webster to 1st, Polk from Locust to Cemetery Lane, and Cooper from Walnut to Dickinson; plans reconstructing Elm from Jackson to 2nd, and Locust from point south of Clay to 1st. Address The Mayor.

Mo., Jefferson City—For proposal details see Mchy. Wanted—Paving.

Mo., St. Louis—For full details see Water Works.

Mo., Springfield—Missouri State Highway Dept., Jefferson City, Mo., will let contracts March 15 for 8 sections of roads as follows: 2 mi. concrete road between National Cemetery and Galloway; 10 mi. secondary road between Carthage and Springfield; 4 sections of road in Pulaski County, and 2 sections in Phelps County.

Mo., Springfield—City contemplates paving with concrete, Pine St., between Grant and Main Aves. Address The Mayor.

Mo., Trenton—City plans paving sections of Washington, Pleasant View and E. 8th Sts., with tarvia, and Mable, Lulu and 15th Sts. with concrete. Address The Mayor.

North Carolina—State Highway Comsn., Raleigh, N. C., plans 20 road projects as follows: No. 115, Chowan-Perquimans Counties, Route 342, 11.83 mi. hard surface road from Edenton to Hertford; 146, Hertford-Bertie Counties, Route 305, 9.10 mi. soil road from Northampton County line to Aulander; 151B, Hyde County, Route 91, between Swanquarter and Rose Bay, 6 mi. sand asphalt; 213, Craven County, Route 10, 10.43 mi. hard surface road between Jasper and Fort Barnwell; 293, Wilson County, 9 mi. between Wilson and Green County line on Route 91;

408, Durham County, 0.47 mi. hard surface in Durham on Route 10.

No. 437, Harnett County, 11 mi. soil road between Lillington and Duke on Route 60; 457A, Orange County, 8 mi. grading and structures between Durham County line and Hillsboro on Route 10; 485A, Wake County, 7.50 mi. grading and structures between Neuse River and Franklin County line on Route 50; 578, 8 mi. hard surface, Randolph County between Ashboro and Deep River on Route 70; 670 Moore County, 22.70 mi. soil road and structures between Aberdeen and Montgomery County line on Route 70.

No. 616, Cabarrus County, 10 mi. soil road between Mecklenburg County line and Stanly County line on Route 27; 643, Iredell County, 8.56 mi. hard surface from Statesville to Rowan County line on Route 10; 723, Caldwell County, 3.50 mi. soil road between Lenoir and Watauga County line on Route 17; 713A, Ashe County, 3.53 mi. hard surface between Jefferson and Wilkes county line on Route 68; 835, Henderson County, 6.84 mi. hard surface between Rutherford County line and Buncombe County line on Route 20.

No. 802, Avery County, 4.5 mi. soil road between Newland and Cranberry on Route 175; 944, Haywood County, 11.67 mi. hard surface between Waynesville and Canton on Route 10; 971, Madison County, 7.85 mi. macadam road between Hot Springs and Tennessee line on Route 20; 930A, Graham County, 3 mi. macadam road between Top-ton and Robbinsville on Route 108; invite bids early in April.

N. C., Burlington—For proposal details see Mchy. Wanted—Paving.

N. C., Enfield—For proposal details see Mchy. Wanted—Paving and Sewer Construction.

N. C., Graham—State Highway Dept., Raleigh, N. C., plans building hard surfaced road between Graham and Belmont mills.

N. C., Henderson—City let contract to R. G. Lassiter & Co., Raleigh, N. C., for additional paving. Address The Mayor.

Okla., Tulsa—For full details see Land Developments.

N. C., High Point—City will pave portions of following streets: Mangum Ave., Willis, Beaman, Hoover, Wise, Park, Commerce Smith and Perry Sts. Address The Mayor.

N. C., High Point—For full details see Land Developments.

N. C., Lenoir—State Highway Comsn., Raleigh, N. C., contemplates constructing 2 roads as follows: Lenoir-Blowing Rock, and Lenoir-Wilkesboro roads.

N. C., Manteo—Dare County, Wm. A. Hart, Highway Commr., plans building 9 mi. shell road on Roanoke Island.

N. C., Rockingham—City plans paving main streets, lay curb and gutter and grade every street, including one from new High School to Covington, parallel with Washington; extend New St. south to overhead bridge to be built over Seaboard tracks; contemplates issuing about \$100,000 bonds. Address The Mayor.

Okla., Sapulpa—Creek County, Tiger Township plans hard surfacing 20 mi. road from Payne County line, west of Drumright, to Oilton, connecting with Albert Pike Highway, and another section east of Oilton; plans voting on \$300,000 bonds. Address County Commissioners.

S. C., Aiken—Aiken County Commissioners, J. W. Ashhurst, Jr. Clk., will pave highway between Aiken and Augusta with concrete and establish five toll gates; contemplates

voting in July on \$450,000 bonds. (Lately noted.)

S. C., Aiken—For proposal details see Mchy. Wanted—Road Construction.

S. C., Bishopville—For proposal details see Mchy. Wanted—Road Construction.

S. C., Charleston—City, J. H. Dingle, Engr., received low bid from Simmons-Mayrant Co., Charleston, at \$460,250, for about 200,000 sq. yds. asphalt pavement. (Lately noted.)

S. C., Chester—For proposal details see Mchy. Wanted—Road Construction.

S. C., Conway—Horry County plans building highways and bridges; contemplates issuing \$30,000 bonds. Address County Commissioners.

S. C., Gaffney—Cherokee County Highway Comsn., W. E. Peeler, Commr., will receive bids until March 16 to grade, construct drainage structures, and pave 1.782 mi. National Highway through Blacksburg, plain concrete, sheet asphalt or asphaltic concrete.

Tenn., Chattanooga—E. D. Bass, Commr. of Streets and Sewers, let contract to J. A. Stein & Co., to lay sidewalk and curb on Broad St. from 4th to 1st Sts. (Lately noted.)

Tenn., Chattanooga—For proposal details see Mchy. Wanted—Paving.

Tenn., Greeneville—For full details see Water Works.

Tenn., Milan—For full detail see Sewer Construction.

Tenn., Trezevant—City will lay concrete sidewalks on E. Main St. Address The Mayor.

Tex., Abilene—Taylor County Commrs. Court, D. G. Hill, County Judge, let contract to Womack Construction Co., Sherman, Tex., at \$61,000, for 11.32 mi. S. H. No. 7, in Lawn Dist. (Lately noted.)

Tex., Angleton—Brazoria County, J. T. Loggins, County Judge, plans 13.82 mi. shell surfaced road on West Columbia Anchor Line—Stratton Ridge Highway, Road Dist. No. 20, \$156,000; E. N. Gustafson, Engr., Road Dist. No. 20; also 17.24 mi. Houston-Angleton Highway; shell and rock base surface; bituminous topping, \$260,000; H. W. Munson, Res. Engr., Road Dist. No. 16.

Tex., Bastrop—Bastrop County, J. B. Price, County Judge, let contract to C. C. Moore, Temple, Tex., at \$17,207, to grade and construct concrete drainage structures on 6.25 mi. S. H. No. 3-A. (Lately noted.)

Tex., Brenham—Washington County, G. A. Bracher, County Engr., plans grading, and constructing concrete bridges and culverts on section of S. H. No. 36; \$40,000; J. H. Chappell, County Judge.

Tex., Cameron—Milan County, Jeff T. Kemp, County Judge, plans improvements in road district No. 30; \$32,000 available; A. F. Mitchell Co., Engr.

Tex., Clarksville—Red River County, R. J. William, County Judge, plans to receive bids in about 30 days for 7.6 mi. gravel surfaced road on S. H. No. 5, Detroit Dist.; \$100,000; J. B. Rieman, County Engr.

Tex., Commerce—W. F. Cornelius, Mayor let contract to General Construction Co., Fort Worth, Tex., at \$125,000 for 30,000 sq. yds. street paving in residence section, including Washington, Monroe, Greenville, Caddo, Bonham, and Park. (Lately noted.)

Tex., Corpus Christi—Nueces County will build 2 roads. For proposal details see Mchy. Wanted—Road Construction.

Tex., Dallas—For full details see Water Works.

Tex., Fort Davis—Jeff Davis County, J. R. Barnett, County Judge, has plans for construction of 19.5 mi. macadam road, State highway No. 12; approx. cost \$200,000; Herbert Schoorter, County, Engr.

Tex., Galveston—Galveston County Comms. plan road improvement; contemplate voting in April on \$1,000,000 bonds.

Tex., Hemphill—Sabine County Comms. Court, W. H. Davidson, County Judge, plans 11.2 mi. S. H. No. 21, Road Dist. No. 8; W. A. French, County Engr., San Augustine, Tex.

Texas—Hemphill—Sabine County, W. H. Davidson, County Judge, will construct 8 mi. of Milan-Sexton road, bids open; W. A. French, County Engr., San Augustine, Tex.

Tex., Henderson—Rusk County, J. T. Watson, County Judge, let contract to Standifer & Wood, Royse City, Tex., at \$32,472.00 to surface 14.93 mi. state highway No. 26. (Lately noted.)

Tex., Hondo—Ch. Engr., U. S. Bureau of Public Roads, Washington, D. C., approved plans for 11.55 mi. 18-ft. gravel bituminous pavement on San Antonio-Del Rio Highway, Medina County, from Bexar County line through Castroville to Dunlay; \$179,977; Walter & Arneson, County Engrs., Gunter Bldg., San Antonio.

Tex., Hondo—State Highway Dept., Austin, Tex. approved plans for construction of 14 mi. of Meridian Highway in Medina County; approx. cost \$80,000. R. J. Noonan, County Judge; Walton & Arneson, Engrs., Gunter Bldg., San Antonio, Tex.

Tex., Houston—For full details see Land Developments.

Tex., Houston—O. F. Holcombe, Mayor, let contract to Scott Shambaugh at \$59,724, for paving Pecore Ave., between Michaux and N. Main Sts.; to Griswold & Walling, at \$38,016 to gravel Truxilo, Galveston, Columbia and 4th.

Tex., Kaufman—U. S. Dist. Engr., Bureau of Public Roads, Fort Worth, Tex., approved plans for 2 sections of roads as follows: 9.4 mi., 18-ft. gravel bituminous surface road on S. H. No. 15, from Terrell west to Tally-Forney road, Kaufman County, \$203,415.11; 3.7 mi. Dallas-Terrell Highway from Terrell east; bituminous macadam surface; \$54,382.68; S. J. Trendwall, County Engr., Cartwright Bldg., Terrell.

Tex., Liberty—Liberty County let contract to Kenyon Dredging Co., Houston, Tex., at \$196,145.26 for dredging, and to Tibbets Construction Co., Fort Worth, at \$217,690.64 for culverts and bridges, on 34-mi. concrete highway through County; 4000 ft. concrete pile trestle; this firm assigned contract to Austin Bros. Bridge Co., Dallas. Address County Comms.

Tex., Marlin—Falls County, W. S. Hunnicutt, County Judge, will improve roads in District No. 5; has \$30,000 available.

Tex., Nacogdoches—W. T. Baker, Mayor, will receive bids about Apr. 1, for 175,000 sq. yds. street paving, \$350,000; O. L. Fonesgard, Engr.

Tex., Orange—Orange County, E. S. McCarver, County Judge, plans 5.24 mi. concrete pavement on S. H. No. 3, from Vedor to Jefferson County line; \$275,000.

Tex., Rocksprings—Edwards County will receive bids in about 60 days for 18 mi. waterbound macadam road from Rocksprings toward Kerrville; \$168,000; Willard E. Simpson Co., Engr.

Tex., Roscoe—A. J. Parker, Mayor, plans street improvement; will vote March 24 on \$12,000 bonds.

Tex., San Antonio—Dimmit County Road Dist. and Improvement Assn., capital \$25,000, incptd. by R. T. Maher, W. M. Conger and S. P. Wollin.

Tex., Tyler—U. S. Dist. Engr., Federal Bureau of Roads, Fort Worth, Tex., approved plans to build Chandler Road Section of S. H.

No. 31, Smith County; \$132,476; D. K. Caldwell, County Engr.

Tex., Uvalde—Uvalde County, H. C. King, County Judge, will receive bids in about 30 days for 14.11 mi. Sabinal-Knapka Highway, from Medina County line to Frio River; \$135,000; Mack B. Hodges, County Engr.

Virginia—State Highway Comsn., H. G. Shirley, Chmn., Richmond, Va., let contracts for 2 roads as follows: To Henry W. Roberts, Clara, Md., at \$198,812.28 for 6 mi. concrete road south from Tasley, Proj. No. 221; and to Harrison Engineering & Contracting Corp., Buffalo, N. Y., at \$103,221.29 for 2.9 mi. concrete road from Tasley to Onancock. (Lately noted.)

Va., Charlottesville—For proposal details see Mch. Wanted—Paving.

Va., Graham—Henry Clay Callaway, Mayor, plans expending \$50,000 for 1 mi. concrete street and 2 mi. sidewalks; J. B. Graham, Engr. (Lately noted.)

Va., Norfolk—City Comms. of Dist. No. 6 plan constructing streets and making other annexed territory; contemplate bond issue.

Va., Staunton—Augusta County, Board of Suprvs., will build 3 roads. For proposal details see Mch. Wanted—Road Construction.

Va., Suffolk—R. H. Brinkley, City Mgr., contemplates expending \$156,000 for street paving and sewerage, as follows: Linden, Smith, St. James, Grace, and Chestnut, gravel; Bank, macadam; Willons, Clay, 'inner, Katherine, Cedar, Culloden, concrete; also improve W. Washington St.; lay sewers on Lee, Wilson, N. Main, South Bute, Polk, Day, Mahan, etc.

W. Va., Clarksburg—For proposal details see Mch. Wanted—Paving and Sewer Construction.

W. Va., Fairmont—For proposal details see Mch. Wanted—Road Construction.

W. Va., Wheeling—City, received low bid from Coss & Otto at \$46,983.04 to pave Market St. from 10th to Wheeling Creek bridge, at \$30,290.67 for Main St. from 12th to Wheeling Creek bridge, and at \$48,029.42 for Main St. from Wheeling Creek bridge to 27th St.; also to P. J. Gilligan, at \$7404.83 to pave 10th St. from Market to Main; all brick on 7-in. concrete base.

W. Va., Williamson—Mingo County, Stafford Dist., plans building link in Tug River Highway; voted \$300,000 bonds. Address County Comms. (Lately noted.)

Sewer Construction.

Ala., Montgomery — For full details see Road and Street Construction.

Ark., Little Rock—For proposal details see Mch. Wanted—Paving and Sewer Construction.

Fla., Dade City—For full details see Water Work.

Fla., Gainesville—City contemplates voting on \$300,000 bonds for extension and improvements to sewer, water, and light facilities and paving. Address The Mayor.

Fla., Lake City—City will enlarge sewers, water, light and cold storage facilities will vote on \$250,000 bonds. Address The Mayor.

Fla., Miami—For full details see Road and Street Construction.

Fla., Miami—City, H. E. Ross, Clk. votes March 20 on \$100,000 bonds for constructing sanitary sewer and \$75,000 bonds for storm sewer.

Fla., Winter Garden—City voted \$40,000 bonds for completion of water and sewer system. Address The Mayor.

Ga., Atlanta—For full details see Land Developments.

Ky., Paducah—For proposal details see Sewer Construction.

La., Baton Rouge—City will vote on \$2,000,000 bonds for following work: extension to paving, sewerage and drainage, construction of municipal dock on Mississippi River, etc.; J. W. Billingsley, Conslt. Engr., New Orleans. (Lately noted.)

La., West Monroe—For full details see Water Works.

Miss., Biloxi—For full details see Road and Street Construction.

Miss., Jackson—For full details see Road and Street Construction.

Miss., Meridian—City voted \$25,000 bonds for extending sewerage system and completing city's concrete bridge building program. Address The Mayor.

Mo., Cameron—City let contract to Tom Johnson for laying sewers in Dist. No. 17. (Lately noted under Cameron, Texas.)

Mo., Carthage—City, E. S. Glenn, Engr. will receive bids for reconstruction of part of sewer District No. 1 and sewers in newly created districts No. 21 and 76; cost \$12,000.

Mo., Clinton—City is receiving bids for construction of sanitary sewer in Dist. No. 36. Address The Mayor.

Mo., Neosho—City let contract to Queal Construction Co., Perrington, Kansas at \$170,864.8 to construct sanitary sewer system. (Lately noted.)

Mo., St. Louis—For full details see Water Works.

N. C., Asheville—For full details see Textile Mills.

N. C., Enfield—For proposal details see Mch. Wanted—Paving and Sewer Construction.

N. C., Fayetteville—For full details see Water Works.

N. C., High Point—For full details see Land Developments.

Okla., Tulsa—For full details see Land Developments.

S. C., Charleston—Charleston Engineering & Contracting Co., was lowest bidder at \$364,124.50 and \$358,384.50 for local and foreign castings used in construction of drains on certain streets comprising 1923 paving schedule.

Tenn., Greenville — For full details see Water Works.

Tenn., Milan—City will vote in March on \$100,000 bonds for installation of sewers, school and streets. Address The Mayor.

Tex., Dallas — For full details see Water Works.

Tex., Houston—For full details see Land Developments.

Va., Suffolk—For full details see Road and Street Construction.

W. Va., Clarksburg—For proposal details see Paving and Sewer Construction.

Telephone Systems.

Fla., Bradenton—Peninsular Telephone Co., W. G. Brorein, Prest., Tampa, Fla., will expend between \$25,000 and \$50,000 in laying new lines throughout Bradenton, Palmetto and Manatee; W. U. Lathrop, Mgr.

Fla., Miami—Tropical Radio Co. plans erecting radio station at Hialeah, to be completed within next 15 months; the two sending towers, each to have 150 ft. square base, built of concrete interworked into underlying beds of rock; constructed with ample current to broadcast around the world; also construct receiving stations.

Tex., Port Lavaca—Coast Telephone Co. of Palacols increased capital to \$70,000.

Tex., Houston—For full details see Land Developments.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Textile Mills.

Ga., Summerville — Belton Mills, capital \$200,000, inceptd. with J. M. Bellah, Prest. and Treas.; Sam C. Martin, Secy.; will mfr. sheeting and duck.

N. C., Asheville—Asheville Cotton Mill will rearrange mchy, replacing part of old spinning with new; will install individual motor drives on spinning; planning to install water and sewerage in village; J. E. Sirrine & Co., Engrs., Greenville, S. C.

N. C., Burlington—Aurora Cotton Mill, will complete electrification of mill; at present partly motor driven and remaining mchy. mechanically driven by steam engine; power will be purchased; will also construct office and storage bldg.; revamp dye plant; J. E. Sirrine & Co., Engrs., Greenville, S. C.

N. C., Concord—Norcott Mills Co., C. W. Johnston, Prest., let contract for construction of 3 story addition to mill.

N. C., Concord—Brown Mfg. Co., C. W. Johnston, Prest., let contract to Brown-Harry Co. of Gastonia, to construct 75 ft., 2 story reinforced concrete; cost \$25,000; R. C. addition to present mill for use as dye plant; Biberstein, Archt.-Engr., Charlotte, N. C.

N. C., Edenton—C. O. Robinson, of Elizabeth City, N. C., purchased mill of Edenton Hosiery Co., will improve and operate.

N. C., Forest City—Alexander Mfg. Co. is having plans prepared for erection of weave shed for mfr. of wide sheetings; 1 story; daylight construction; ultimate capacity of weave shed 350 looms; will purchase power; J. E. Sirrine & Co., Engrs., Greenville, S. C. (Lately noted.)

N. C., Thomasville—Amazon Cotton Mill, will erect additional mill; install 8000 spindles; rearrange mchy. using present bldg. for spinning and twisting; install preparatory mchy. in new bldg., motor driven throughout; J. E. Sirrine & Co., Engrs., Greenville, S. C.

N. C., Wadesboro—Wade Mfg. Co., W. Henry Liles, Secy.-Treas., let contract to Thompson Bros., Charlotte, N. C. and Atlanta, Ga., for construction of mill for mfr. of nap goods; brick; cost about \$200,000; will install 400 looms and 7500 spindles; will open bids about April 1 for machinery; install hydro electric plant; 500 H. P. electric drive; Robert & Co., Inc., Atlanta, Ga., Engrs.; will construct 100 to 125 mill operatives homes, bungalow type, 3 to 6 rooms each; hydro-electric power contracted for with Yadkin River Power Co. (Lately noted.)

S. C., Greenville—Southern Worsted Co., A. M. Patterson, Treas., Waterloo, N. Y., will incorporate with \$1,100,000 to build worsted mill near Greenville or Spartanburg; Waterloo Mfg. Co., which will reincorporate as Waterloo Textile Corp., Waterloo, N. Y., Judson Mills, Greenville, S. C., and Lockwood, Greene & Co., Boston and Atlanta, reported interested; plant to be equipped with 120 looms, dyeing, spinning and finishing machinery; J. F. Syme, formerly of D. Goff & Sons, Pawtucket, R. I. will be manager.

S. C., Spartanburg—Beaumont Mfg. Co., will erect 2 story and basement building 258x86 ft. for weaving; will install 450 looms and move 186 from present mill; rearrange mchy. in Mills 1 and 2; J. E. Sirrine & Co., Engrs., Greenville, S. C.

S. C., Taylor — Southern Bleachery, Inc., Greenville, S. C., H. R. Stephenson, Prest. will construct bleachery and finishing plant with ultimate capacity of 3,000,000 yds. per week; water will be pumped from Enoree River, ultimate requirement 60,000,000 gals. per week; bldg. will be E shaped; 718x314 ft.; finishing bldg. 2 stories and basement. 314x106 ft., remaining part 1 story; type

construction will be mass concrete walls with wooden beams, cast iron columns, wooden floors and steel sash; daylight construction except for Kier and Washer room, where concrete window sills will be used; warehouse of standard mill construction; reinforced concrete power plant; motor drives used throughout; J. E. Sirrine & Co., Engrs., Greenville, S. C. (Contract lately noted let to Gallivan Bldg. Co., Greenville, S. C.)

Tenn., Fayetteville—Elk Cotton Mill will enlarge present mill, adding approx. 4000 spindles and necessary preparatory machinery and twister frames; J. E. Sirrine & Co., Engrs., Greenville, S. C.

Tenn., Murfreesboro—Murfreesboro Woolen Mills, capital \$100,000, inceptd. by J. S. Braswell, P. D. Powell and A. L. Todd.

Tex., Breckenridge—Ray B. Leach, Secy. Chamber of Commerce, interested in establishing \$500,000 mill for mfr. of gingham.

Tex., Mesquite—Mesquite Textile Mills Co., capital \$400,000, inceptd. with Schuyler, B. Marshall, Prest.; C. Rugel, V. P.; John S. Lawrence, Secy.; will erect cotton mill.

Tex., San Antonio—Divide Wool & Mohair Co., capital \$10,000, inceptd. by H. H. Rogers, W. C. Sprinkle.

Water Works.

Ark., Tex.—Texarkana—Texarkana Water Corp., office 112 N. Broad St., Phila., Pa. 1st contract to A. G. Kress, for laying 30,000 ft. of 12-in. water mains. (Lately noted.)

Fla., Dade City—City voted \$18,000 bonds, \$12,000 of which will be used for extending water and sewer mains, and remainder for paving. Address The Mayor. (Lately noted.)

Fla., Gainesville—For full details see Sewer Construction.

Fla., Lake City—For full details see Sewer Construction.

Fla., Miami—City, H. E. Ross, Clk. will vote March 20 on \$750,000 bonds for water works. (Lately noted.)

Fla., Winter Garden—For full details see Sewer Construction.

Ga., Atlanta—For full details see Land Developments.

La., West Monroe—City will vote April 3 on \$87,000 bonds for construction of sewer system and \$53,000 bonds for improvements and enlargements to sewer system. Address The Mayor.

Mo., Kirksville—City voted \$260,000 water bonds for water works improvements; will soon call for bids. Address The Mayor. (Lately noted.)

Mo., St. Louis—Board of Public Service recommended expenditure of \$9,937,500 for first years construction work under the \$87,372,500 bond issue lately voted, work includes the following: \$2,000,000 for Olive St. widening, 12th. Blvd. to Channing Ave.; \$300,000 for paving 12th. St., Russell to Chouteau; Souard, 12th. to 14th.; Loughborough, Colorado to Field; Loughborough, Field to Gravois; Watson rd., Southwest to Pernod; \$1,250,000 for electric street lighting system and \$40,000 additional for preparing plans; \$450,000 for construction and re-construction of North Baden relief sewer; \$550,000 for Ohio-Montrose relief sewer (in Mill Creek Valley) \$50,000 for surveys and plans for rebuilding old sewers; \$75,000 for installation of additional inlets in various sections of city; \$150,000 for repair of crumbling sewer outlets along Mississippi river; \$1,000,000 for first section of River des Peres sewer and storm channel, probably from Manchester Ave., through Forest Park; \$105,000 for Gravois Ave. bridge over River des Peres; \$200,000 for improvement

work in all parks; \$1,000,000 (full amount voted) for municipal power plant and power building; \$485,000 for general hospital extension; \$772,500 (full amount voted) for fire department motor equipment and re-construction of engine houses \$1,500,000 for water works on Missouri river including \$450,000 for construction of dikes, \$810,000 for river intake and engine pits, \$65,000 for surface road from Hine to plant site on Howards Bend of river, purchase of land, railroad switches and other construction.

N. C., Asheville—For full details see Textile Mills.

N. C., Fayetteville—Board of Aldermen will issue \$350,000 bonds for water and sewerage extension. Address The Mayor.

Okla., Tulsa—For full details see Land Developments.

Tenn., Erwin—Erwin Water Co., increased capital to \$60,000.

Tenn., Greeneville—City is receiving bids for construction of additional sewer and water mains and paving of 3 mi. streets; \$125,000 available. Address The Mayor.

Tex., Dallas—City, S. R. Aldredge, Mayor, will vote in April on \$8,325,000 bonds for following improvements; \$5,000,000 for water supply; \$1,000,000 for schools; \$1,250,000 for streets; \$500,000 sewerage disposal and \$150,000 for sanitary sewers; \$100,000 for fire stations; \$325,000 for parks.

Tex., Granbury—City, A. T. Keith, Mayor, will vote March 20 on \$47,000 bonds for water works improvements and \$28,000 bonds for construction of electric light plant.

Tex., Houston—For full details see Land Developments.

Tex., Knox City—City voted \$45,000 bond issue for construction of water works system. Address The Mayor.

Tex., Port Arthur—For full details see Gas and Oil Enterprises.

Tex., Roscoe—City, A. H. Parker, Mayor, will vote March 24 on \$12,000 bond issue for water works improvements.

Tex., San Antonio—J. L. Lytle Realty Co., let contract to N. A. Saigh Co. for construction of water system in Temple Hill Addition cost about \$11,000.

Va., Ballston—City, E. J. Plarr, Ch. of Volunteer Fire Dept., contemplates construction of reservoir in Lacey Run; will install pump with capacity of from 800 to 1000 gals. per minute operated by 25 H. P. motor which in turn will be controlled by automatic switch; will place fire plugs one block apart through center of Billston from Lacey to Cherry Valley St.

W. Va., Keyser—City, L. D. Warner, Clk. will expend about \$175,000 in improvements to water works system; will relay and enlarge water mains, cost \$40,000, estimated cost of filtration plant equipped, about \$90,000; mechanical filtration plant with low or high pressure pumps, stand pipe, 50x60 ft. high, cost estimated at \$15,000. (Lately noted.)

W. Va., Wheeling—For proposal details see Mchy. Wanted—Waterworks Improvements.

Woodworking Plants.

Ala., Albany—Hardwood—Covington & Young of College Grove, Tenn. will erect mill for mfr. of hardwood band and finishing products; acquired site on Tennessee river.

Ala., Birmingham—Jefferson Woodworking Co., Inc., chartered by R. H. Alexander and others.

Fla., Jacksonville—Florida Sash & Door Co., inceptd. with S. A. P. Hudgings, Prest.; Pauline C. Thomas, Secy.-Treas.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ga., Austell—Chairs—Chas. J. Shelverton, Austell, Ga., contemplates establishing chair manufacturing plant operated by steam power; install engine boiler, shafting wood-working mchy. and small saw mill outfit. (See Mchy. Wanted—Chair Machinery; Engine; Boiler; Shafting, etc.)

Ga., Dublin—Bobbins—Jordan Mfg. Co., Monticello, Ga., plans erecting plant for mfr. of bobbins for cotton mills.

Ga., Rome—Rome Cabinet Co. contemplates building 250 addition to plant, to mfr. bed room suites, etc.

Md., Baltimore—Picture Frames—White-Seldenman, 17 S. Howard St. have acquired 204x200 ft. building on O'Donnell St., near 3rd; will remodel; mfr. picture frames.

Miss., Tutwiler—Tutwiler Hoop Co., incptd. by V. B. Dickens, Tutwiler, B. E. Morrison, Memphis, Tenn., and others.

Mo., Poplar Bluff—Spokes—Bimel Ashcroft Mfg. Co., has under construction brick dry kiln in connection with plant; cost several thousand dollars.

Mo., St. Louis—Veneer Door Product Co., capital \$22,000, incptd. by Wm. Biebinge, J. V. and F. P. Fleming.

Tenn., Memphis—A. B. C. Trailer Truck Co., Inc., Mallory and Latham Aves., has plant for mfr. of steerable ½ ton trailers for Ford cars 10 daily, and up to 5 ton steerable trailers for Fordson tractors, about 20 daily; will install foundry equipment and automobile accessories, etc. Address Thos. M. White, Box 2462. (See Mchy. Wanted—Foundry Equipment; Automobile Accessories.)

S. C., Greenville—Zinn Beck Bat Co., capital \$60,000, incptd. with Zinn Beck, Prest. and Prest.; Charles R. Beck, Secy.

Tenn., Memphis—Memphis Sash & Door Co., L. G. Barnard, Prest. let contract to D. D. Thomas & Son at \$100,000 to erect 2 story and basement sash and door plant, at Roland Ave. equip with sprinkler system, etc. (Late-ly noted.)

Tex., San Antonio—San Antonio Body Co., 1109 W. Houston St. (late-ly noted incptd., capital \$25,000) organized with W. W. Bras-sell, Prest.-Mgr.; Jno. Bucek, Secy.-Treas.; has plant for mfr. of commercial bodies, daily capacity 10.

Tex., Tyler—Banks-Walker Furniture Co., increased capital to \$15,000.

Va., Newport News—Hub Furniture Co., capital \$10,000, incptd. with S. T. Sterrett, Prest.; S. I. Davis, Secy., both Staunton, Va.

Va., Richmond—Economy Barrel Corp., capital \$25,000, incptd. with R. J. Bell, Prest., Thomas Bell, Secy.

FIRE DAMAGE

Ala., Mobile—Volunteers of America Home.

Ala., Montgomery—N. W. L. Thompson & Son's store, 18 Dexter Ave.; loss \$10,000; building at 1 Court Square owned by M. L. Williams and Mrs. M. L. Bartlett estates.

Ala., Roanoke—Handley Public School. Address School Board.

Ala., York—W. D. McRea's planing mill and box factory; loss \$50,000.

Ark., Delight—School building. Address School Board.

Ark., Helena—Jos. L. Solomon's residence; loss \$30,000; present address, Newman home, Liberty Ave.

Ark., Kingsland—J. E. McCoy & Son's store; Cleveland County Bank.

Ark., Malvern—Taylor Henson's residence.

Fla., Palm Beach—Frank Johnson's residence, 240 Chilian Ave.; loss \$14,000.

Ark., Round Pond—H. H. Harden's building; W. H. Bynum's store; Belmorby Co.'s building; Powell Drug Store.

Ga., Danielsville—Schools at Berea and Mill Shoals. Address Madison County School Board.

Ga., Macon—M. P. Terry's residence, 105 Cabaniss Ave., East Macon.

Ga., Round Oak—White Bros.' store.

Ga., Thomasville—J. H. Flowers' residence, N. Dawson St.; loss \$15,000

Ga., Wadley—Water Works plant, owned by Overstreet Bros.; loss \$12,500.

Ga., Wrens—Young-McNair Cotton Oil Co.'s plant; loss \$50,000.

Ky., Elkhorn City—Elkhorn City Drug Co., A. D. Jackson, Coleman & Wallace's stores; J. C. Charles and R. S. Johnson's residences; postoffice; loss \$25,000.

Ky., Louisville—Shaffer Bros. garage; loss \$4,000.

Ky., Owensboro—Alexander Hill's residence, Maple Court; loss \$10,000.

La., New Orleans—Hicks Building at Bar-ronne and Union Sts. Address The Owner.

La., Opelousas—Warehouse owned by Tot Hinchcliffe and H. J. Landers, of Crowley.

Md., Pocomoke—Marvil Package Co.'s ware-houses; loss \$25,000.

Miss., Bay Springs—Presbyterian Church (Address The Pastor); residences of Mrs. W. W. Horn and W. W. Pittman.

Miss., Oxford—Capt. F. M. Stowers' resi-dence; loss \$12,000.

Miss., Poplarville — Love Lumber Co.'s plant; loss \$100,000.

Mo., Kansas City—Peycke Bros. Commission Co.'s building, Second and Main Sts.; build-ing at 2008-10 Baltimore St. occupied by Cen-tral Glass Co. and K. & B. Supply Co.

Mo., Monnett—St. Mary's Parochial School.

Mo., Rockport—Grammar school; loss \$50,-000. Address Board of Education.

Mo., Springfield—Landers' Lumber & Ce-ment Co.'s warehouse; loss \$85,000.

N. C., Albemarle—L. C. Russell's store on N. First St.

N. C., Charlotte—Efrid's Department Store, J. B. Efrid, Mgr.

N. C., Davidson—Watts dormitory at Da-vidson College.

N. C., Hendersonville—W. R. McGraw's residence, Willow Rd.

N. C., Oxford—J. F. White's garage on College Ave.

N. C., Thomasville—Eugene Swain's barn.

N. C., Washington—J. M. Swindell & Co.'s oyster packing plant and lime factory; loss \$15,000.

S. C., Columbia—Kramer's Shoe Store in 1500 block Main St.

S. C., Gaffney—Fay Smith's residence, 6th St.

S. C., Florence—Frank J. Brand's resi-dence.

S. C., Greenville—Brandon Mill Baptist Church, Rev. J. W. Wren, Pastor; loss \$20,-000; C. O. Allen's residence, Broadus Ave.

Tenn., Columbia—R. A. Locke's barn.

Tenn., Jonesboro—J. R. Saylor and J. B. Bowman's residences, Cherokee St.

Tenn., Nashville—R. B. Williams' store and residence, Berry St. and Lischey Ave.; loss \$12,000.

Tenn., Nashville—R. B. Williams' store at Berry St. and Lischey Ave.

Tex., Dallas—Darby Top & Paint Co.'s building; loss \$35,000.

Tex., Cedar Creek—Alexander & Randle's building.

Tex., New Braunfels—Adolph Reeh's store and bowling alley.

Va., Danville—A. Y. Buck's residence and roofing shop, River Rd. near Danville.

Va., Lynchburg—W. H. Steele's residence, Six Mile bridge.

Va., Norfolk—Sanford-Brooks Building, 421 Water St., occupied by Atlantic Supply Co.

Va., Norfolk—Park Place M. E. Church; loss \$150,000. Address The Pastor.

Va., Salem—Store and residence on W. Main St. owned by H. C. Gray, Christians-burg.

W. Va., Beckley—Building owned by Bal-leigh County Bank and occupied by post office, Western Union Telegraph Co., E. M. Merrill Engineering Co. and others; loss \$100,000.

W. Va., Huntington — Dalton & Kelly's building.

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

Ark., Forest City—S. J. Dean, Vice-Pres. and Cashr., Planters' Bank, will erect 2-story apartment house.

Fla., Miami—Ditmar & Williams are pre-paring plans for apartment house, 2nd Ave. and S. W. 3rd Rd.

Fla., Miami Beach—W. S. Witham, Atlanta and Miami, will erect 2 buildings, Meridian and Michigan Aves.; storerooms on first floor, apartments above.

Fla., St. Petersburg—J. M. Scholl will erect \$10,000 office and apartment house, Beach Dr. and 7th Ave., North; 3 stories; frame.

Ga., Atlanta—E. W. Bigham Investment Co. will erect \$1,050,000 bachelor apartment house, Harris St. near Ivy St.; fireproof; 12 stories; 90x150 ft.; tar and gravel roof; Danell & Beutell, Archts., Healey Bldg. (Late-ly noted.)

Mo., Jefferson City—Frank H. Wymore con-sidering erecting efficiency apartment house of 30 three-room suites and also building ad-joining to contain 6 five-room suites; both on Washington St.

N. C., Wilson—Jesse B. Williams will erect 4-story apartment house, Goldsboro St. near Vance St.; brick and stone; 35 suites; Benton & Benton, Archts.; contract about April 1.

S. C., Columbia—J. W. McCormick plans to erect \$50,000 to \$60,000 apartment house, Senate and Marion Sts.; 3 stories; 84x157 ft.; steam heat; four 4 and 5-room suites on each floor.

Tenn., Memphis—J. B. Cook will erect \$30,000 apartment house, 1995 Union Ave.; hardwood floors; 2 stories; built-in features; 4 suites of 5 rooms each; Jas. L. Gatling, Archt.

Tex., Dallas—J. M. Shaw will erect \$27,-000 apartment house, 1032-34 N. Beckley Ave., Oak Cliff; brick veneer; 32 rooms; 8 suites.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

W. Va., Charleston—W. R. Johnson will erect 6-room addition to residence on Walnut St., South Side; \$10,000; brick and tile.

Association and Fraternal.

Miss., Natchez—Herbert J. Remondet Post No. 4 plans to erect clubhouse.

Mo., Kansas City—Young Men's Hebrew Assn., Herman Passamaneck, Exec. Secy., 2123 Troost Ave., will erect \$300,000 building, Linwood Blvd. and Wayne Ave.; Italian renaissance type; gray brick; terra cotta trim; red tile roof; gymnasium, running track, auditorium, stage, swimming pool, roof garden, etc.; Greenebaum, Hardy & Schumacher, Archts. (Previously noted.)

Va., Salem—Ancient Free and Accepted Masons are reported to cooperate with Town Council, I. O. O. F. and K. of P. to remodel and enlarge town hall instead of erecting building as previously noted.

Bank and Office.

Fla., Tampa—Tampa Tribune, Col. W. F. Stovall, owner, purchased Bentley-Gray Dry Goods Co.'s building and adjoining site, Twiggs and Tampa Sts.; will erect 4 or 15-story structure; stores on first floor, offices above; B. C. Bonfoey, Archt.; will remodel present building for Tribune, probably Jan., 1924.

Ga., Savannah—Henrik Wallin will prepare plans to remodel Commercial Bank Bldg., Drayton and Bryan Sts., for offices.

Ky., Louisville—Jefferson County Dental Society, Dr. Geo. Means, Prest., considering erection of 6-story office building for dentists and physicians.

Mo., Kansas City—Kansas City Life Insurance Co., J. B. Reynolds, Pres., plans to erect office building, Broadway and Armour Blvd.; Wight & Wight, Archts. (Lately noted.)

Va., Richlands—Richlands National Bank, G. M. Brown, Prest., is enlarging building. (Lately noted under W. Va., Richlands.)

Churches.

Ala., Selma—St. Paul's Episcopal Church will erect \$50,000 parish house; plans drawn. Address The Pastor.

Fla., St. Petersburg—M. E. Church, South, Rev. C. H. Summers, Pastor, will not erect \$250,000 building as lately reported.

Mo., Hume—Methodist Church reported to rebuild burned structure; \$10,000. Address The Pastor.

Mo., Kansas City—South Park Christian Church will erect \$40,000 Sunday school unit; construction begun. Address The Pastor.

Mo., St. Louis—Immanuel Congregational Church, Lindenwood, St. Louis County, H. F. Scherr, Deacon, will erect \$50,000 church and parsonage; contract let for parsonage.

Mo., St. Louis—Archbishop John J. Glennon purchased site in Westmoor subdivision, Pennsylvania Ave. and Clayton Rd., for Catholic church and parochial school.

N. C., Lilesville—Louis H. Asbury, Charlotte, is preparing plans for church.

N. C., Mount Pleasant—Louis H. Asbury Charlotte, is preparing plans for church.

N. C., Raleigh—First Christian Church, L. L. Vaughn, Chmn. Bldg. Comm., will erect stone building, Hillsboro and Dawson Sts.; main and Sunday school auditorium combined to seat 1000; \$75,000 to \$100,000; Nelson & Cooper, Archts.

Okla., Pawhuska—First Christian Church will erect \$50,000 building. Address The Pastor.

S. C., Greenville—Brandon Mill Baptist

Church, Rev. J. W. Wren, Pastor, reported to rebuild church noted burned at \$20,000 loss.

Tex., San Antonio—Beacon Hill Baptist Church, Rev. Melvin C. Eldson, Pastor, will erect 5-story Sunday school annex; \$75,000.

Va., Culpeper—Baptist Church will erect \$18,000 brick Sunday school building; Herbert L. Cain, Archt., 12 N. 9th St., Richmond.

Va., Danville—Mount Vernon Methodist Church will remodel Sunday school; \$30,000. Address The Pastor.

Va., Norfolk—Park Place Methodist Church, Rev. S. H. Newberry, Pastor, will rebuild structure noted burned; \$300,000.

Va., Petersburg—Colonial Heights Baptist Church, Harry L. Snead, Chmn. Bldg. Comm., will erect \$40,000 building; brick and stone; concrete foundation; 2 stories; slate roof; Herbert L. Cain, Archt., 12 N. 9th St., Richmond. (Previously noted.)

Va., Petersburg—West End Baptist Church will erect \$30,000 brick Sunday school building; Herbert L. Cain, Archt., 12 N. 9th St., Richmond.

W. Va., Charleston—James L. Montgomery, Coyle & Richardson Bldg., will receive bids until March 9 for whole or any part of work to erect Baptist buildings, Quarrier and Morris Sts.; brick; 148x186 ft.; copper roof; composition tile floors; Ernest Flagg, Archt., 111 E. 40th St., New York; drawings and specifications with quantity surveys on file at Builders' Exchanges, Cincinnati and Columbus, O., and Pittsburgh, Pa.; also at office of Mr. Montgomery. (Lately noted.)

City and County.

Miss., Biloxi—Community Building—City voted bonds to erect community or library building, etc. (See Schools.)

N. C., Madison—Fire Station—Town will erect brick fire station, lately noted; 2 stories; 22x52 ft.; cement floors and foundation; metal roof; J. B. McCrary Engineering Co., Engr., Atlanta, Ga.; electrical work and plumbing done by town; bids opened March 2. Address V. H. Idol. (See Mch. Wanted-Fire Alarm System.)

N. C., Winston-Salem—Market—City will erect market, Cherry and 6th Sts.; 1 and 2 stories; 100x240 ft.; concrete floors and foundation; hollow fireproof and interior tile; metal ceilings and doors; vault lights; ventilators; ornamental terra cotta; steel sash and trim; wire glass; refrigerating system and heating plant in basement; 26 stores and 28 stalls; W. C. Northup, Archt., Winston-Salem; Wiley & Wilson, Engrs., Lynchburg, Va.; bids for excavation opened March 10. (Previously noted.)

Va., Grundy—Jail and Residence—Board of Supervisors of Buchanan County, R. A. Looney, Chmn., Stacy, will receive bids until April 2 to erect jail and jailor's residence complete; separate bids for steel cells; plans and specifications from F. H. Combs, Commonwealth's Attorney, Grundy, and on file at office of clerk of Buchanan County.

Va., Portsmouth—Market—City, Gen. Jervy, City Mgr., voted \$200,000 bonds for market. (Lately noted.)

Courthouses.

Ky., Hendersonville—Henderson County Fiscal Court will erect fireproof addition adjoining south side of courthouse; 2 stories; concrete reinforced with steel; fireproof vault; day labor.

La., Monroe—Ouachita Parish Police Jury will call special election in June to vote on \$500,000 bonds for courthouse and jail.

Tex., Colorado—Mitchell County, J. C. Hall,

County Judge, will erect courthouse; \$115,000 bonds voted; David S. Castle, Archt., Abilene. (Lately noted.)

Dwellings.

Ala., Huntsville—Merrimac Manufacturing Co. will erect 40 double tenement houses; construction by day labor under supervision of foreman; Dilworth Lumber Co., contr. for lumber. (Lately noted.)

D. C., Washington—H. A. McQuarry will erect 3 dwellings, 3520-24 Sixteenth St., N. W.; 2 stories; brick; \$12,000; owner builds.

D. C., Washington—Edw. E. Bowling is reported to erect number of dwellings, square 4515.

Fla., Ocala—John M. Taylor will erect native rock residence, E. Fort King St.

Fla., Fort Pierce—J. Noble Thompson, Tulsa, Okla., purchased 12-acre site fronting on Indian River and Dixie Highway, and plans to erect residence.

Fla., Miami—John N. Sherwood, Fort Pierce and Miami, will prepare plans for 300 dwellings, community buildings, etc., to be erected at Fulford-by-the-Sea, 11 miles north of Miami; Spanish or Italian architecture.

Fla., Miami—R. Lewis Jewett, Wichita Falls, Tex., will erect Spanish type residence, Holleman Park; Ditmar & Williams, Archts.

Fla., Miami Beach—Chas. R. Pease will erect 2 dwellings, Sunset Lake subdivision; Spanish type; John Bullen, Archt., Miami.

Fla., Miami Beach—Miss Nellie Carlin, 215 Collins Ave., purchased site, block 9, 28th St. near Indian Creek, and plans to erect winter residence.

Fla., Miami Beach—Miami Ocean View Co. will erect \$35,000 Spanish type dwelling, Star Island; August Geiger, Archt.; will also erect another dwelling on Star Island; W. C. DeGarmo, Archt. (Lately noted in part.)

Fla., Miami Beach—Wm. J. Cleary, Benton Harbor, Mich., Pres., St. Joseph Construction Co., St. Joseph, Mich., will erect winter residence, block 16, Collins Ave.

Fla., Miami Beach—Mrs. Elizabeth Cooper, The Dundas, 4th St., will erect \$25,000 residence, 36th St. and the ocean; W. C. DeGarmo, Archt.

Fla., St. Petersburg—Schooley-Murphy Co. will erect 6 dwellings, 1000 Fourteenth Ave., North, 9 rooms; \$15,000; 925 Tenth St., North, 9 rooms, \$13,000; Orange Ave., 8 rooms, \$12,000; 965 Eighth and 240 Seventh Aves., each 6 rooms, \$5,000; Fern Ave. and Park Court, 9 rooms, \$14,000.

Fla., West Palm Beach—F. V. Earle will erect residence on First St.; foundation begun; will also erect additional dwelling, First St.

Ga., Columbus—Morton Realty Co., Marshall Morton, will erect 10 dwellings, DeLaunay Pl.; \$50,000; brick; 1-story bungalow type.

Ky., Ashland—W. F. Ellis will erect 16 California bungalow type dwellings, lately noted, in Country Club Court, Forest Hills addition; stucco; 1 and 1½ stories; hardwood floors; slate or wood shingle roofs; A. Klein, Archt.; owner builds; Col. Heating & Ventilating Co., Huntington, W. Va., heating; Dalton Electric Co., electrical work; East End Plumbing Co., plumbing; both Ashland. (See Mch. Wanted-Lumber.)

Ky., Hazard—White Elkhorn Mining Co., J. W. Craft, Mgr., will erect 40 miners' houses; contract at once.

Ky., Sergeant—Imperial Elkhorn Coal Co., will erect more miners' houses; contract within 2 weeks.

Md., Baltimore—Merin Bros., 2225 Callow Ave., will erect 5 dwellings, north side Glen Ave., east of Howard Ave.; 2 stories; frame; 28x28 ft.; slate roofs; steam heat; \$12,500; Samuel Smulian, Archt., 1725 N. Carey St.; owner builds. (Lately noted.)

Md., Baltimore—City Real Estate Co., 11 E. Fayette St., will erect 4 dwellings, east side St. Helena Ave., north of Harford Rd.; 1 story; frame; 26x31 ft.; \$10,000; Geo. Wesel, Archt., 3001 Lyttleton Rd.; owner builds.

Md., Baltimore—Mrs. Nettie Goldman will erect \$10,000 residence and garage 3305 Fairview Ave.; 2½ stories; brick; 33x57 ft. and 30x20 ft.; J. C. Spedden, Archt., 2715 Harlem Ave.

Md., Baltimore—Rullman Co., Geo. M. Rullman, Prest., Rogers Forge, will erect about 20 dwellings, Lake Ave., Govans; about \$150,000; 8 rooms.

Md., Baltimore—Geo. M. Hampson, 10 E. Fayette St., will erect 5 dwellings, 3030-38 Brighton St.; \$4000 each; 2 stories; brick; 14x48x25 ft.; wood floors; brick foundation; plaster slate roofs; steam heat; plans by owner. (Lately noted.)

Md., Baltimore—Northern Realty Co. will erect 7 dwellings and 1 duplex house, east side of Old Pimlico Rd. near Wylie Ave.; 2 stories; brick; \$25,000; Stanislaus Russell, Archt., 11 E. Lexington St.

Md., Baltimore—Mrs. Cora W. Bickel, 309 Dolphin St., will erect \$10,000 residence and garage, Southway near Suffolk Rd., Guilford; 2 stories; hollow tile.

Md., Baltimore—Cityco Realty Co., 2 E. Lexington St., will erect 7 dwellings, McCabe Ave., between Ardmore and Alhambra Aves.; 2 stories; brick, \$30,000.

Md., Baltimore—Maurice T. Quill, 511 N. Lakewood Ave., will erect 4 dwellings, west side Ridgecroft Rd. near Wilholme Way; 1½ stories; frame; \$15,000.

Md., Baltimore—Geo. H. Ward, Atlantic Freight Co., will erect \$11,000 residence, Wendover Rd. near Underwood Rd.; 2 stories; stone.

Md., Chevy Chase—F. M. Johnson will erect number of 8 and 10-room dwellings, Harrison and Kanawha Sts. and Bradley Lane.

Miss., Jackson—A. F. Wortman will erect 1-story residence; 114x40 ft.; tile roof; terra cotta trim; Kramer & Lindsley, Archts., 50-53 Kress Bldg.

Miss., Ripley—Baptist Church will erect parsonage. Address The Pastor.

Mo., King City—Clinton Allen will erect residence in spring.

Mo., Mexico—Mayor J. W. Gallaher will erect 60 dwellings; about \$150,000.

Mo., Moberly—O. B. Elsea will erect 10-room residence.

Mo., University City, (Branch of St. Louis)—Majestic Homes Corp., Sam F. Floyd, Prest., will erect 40 dwellings, 6700 block Chamberlain Ave.; foundations laid for first 10.

N. C., Lenoir—C. H. Hopkins will erect native stone and stucco residence, Mulberry St.; English Colonial type; vapor heat; laundry, boiler, fuel and storage rooms in basement; Benton & Benton, Archts., Wilson; I. A. Swanson, Constr. Supervisor, Lenoir.

N. C., Oak Ridge—D. Lanier Donnell, Box 123, will erect \$20,000 rock bungalow; 1½ stories; 48x70 ft.; hardwood floors; rock foundation; tile or Class C roof; steam or hot air heat; will use Southern Power electric lights; Willard H. Northup, Archt., Winston-Salem; owner builds and desires local bids for wiring, equipment for 2 bathrooms, tile or Class C novelty roofing.

Okl., Tulsa—Sunset Gardens Co., A. L. Farmer, Prest., will erect number of dwellings on 200-acre tract, section 13, township 19, range 12, east; \$7500 up; electric lights; gas heat; Hare & Hare, Archts., Kansas City.

Tex., Austin—Enfield Realty Co., Murray Graham, Prest., will erect model home, Enfield Addition, West Austin.

Tenn., Chattanooga—Frank Sparks will erect three 4 and 5-room bungalows, North Chattanooga.

Tenn., Memphis—Dr. H. B. Jacobson will erect bungalow on Forrest Ave.; brick veneer; colored wood shingle roof; hardwood floors; glassed-in sleeping porch; built-in features in kitchen; hot water heat; Estes W. Mann, Archt.

W. Va., Bluefield—Isadore Cohen will erect residence; A. A. Mulhoffer, Landscape Archt.

W. Va., Charleston—C. H. James will erect \$10,000 residence, Virginia St. near Elm St.; brick and tile.

W. Va., Weston—W. M. Taylor will erect residence in Halesville.

Government and State.

La., Baton Rouge—Capitol—State, John M. Parker, Gov., State House, will receive bids until March 15 to repair and fireproof Capitol Building; \$20,000; plans and specifications from Emile Weil, Archt., Whitney Central Bldg., New Orleans.

Mo., Kansas City—Post Office and Courthouse—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C., will receive bids until March 26 for Extension No. 3, including mechanical equipment, for post office and courthouse; drawings and specifications from Custodian at Site or from office Supervising Archt.

W. Va., Huntington—Dwellings—U. S. Engineer Office, Huntington, will receive bids until March 17 to erect two 2-story lock-keepers' double houses at each of Dams Nos. 14 and 26, Ohio River; 12 rooms; brick foundations; felt and asphalt shingle roofing; \$5600 each. (Lately incorrectly noted to open bids March 27.)

Hospitals Sanitariums, Etc.

Ga., Waycross—Atlantic Coast Line Hospital will remodel building and erect dispensary addition; \$10,000; work started.

Ky., Louisville—St. Joseph's Infirmary will erect \$1,000,000 hospital, Preston St. and Eastern Parkway; D. X. Murphy & Bro., Archts. (Previously noted.)

Md., Baltimore—Baltimore Eye, Ear & Throat Hospital, 619 Franklin St., will erect addition to building at Lanvale St. and Eutaw Pl.; 70x50 ft.; 3 stories; brick; standard built-up roof; steam heat; Herbert G. Jory, Archt., Munsey Bldg.; bids opened Mar. 14; following contractors estimating: B. W. Minor, 244 W. Pratt St.; L. L. Chambers, 36th St. and Roland Ave., John J. Moylan, 538 N. Calvert St.; John J. Cowan & Son, 17 E. Lafayette Ave.; Thos. Hicks & Sons, 106 W. Madison St.; Benj. F. Bennett Bldg. Co., 123 S. Howard St.; Tase-Norris Co., 106 W. Madison St.; Consolidated Engineering Co., Calvert Bldg.; R. B. Mason, 308 W. Madison St.; M. A. Long Co., Horn & Horn Bldg.; Williams & Armiger Co., New Amsterdam Bldg.

Miss., Sanatorium—State Bond Improvement Comsn. of Miss., P. O. Box No. 636, Jackson, will erect fireproof building for negroes at Mississippi Tuberculosis Sanatorium (near Magee); reinforced concrete and hollow tile floors; concrete foundation; vapor steam heat; conduit system of lights; Bem Price, Archt., Jefferson County Bank

Bldg., Birmingham, Ala.; bids opened March 5. (Lately noted.)

Tenn., Chattanooga—City, A. W. Chambliss, Mayor, considering \$175,000 bond issue for Erlanger Hospital, C. M. Preston, Chmn. Hospital Board.

Tenn., Memphis—City, Mr. Paine, Mayor, plans to erect \$100,000 maternity ward at Memphis General Hospital; will probably issue bonds.

Tenn., Oakville—Shelby County Commrs. and Memphis City Comsn., Mr. Paine, Mayor, plan joint city and county \$200,000 bond issue for Oakville Sanatorium.

Tex., Dallas—North Texas Conference, M. E. Church, South, will erect Dallas Sanatorium, Ballard and Grover Sts., Oak Cliff, J. H. Groseclose, Supt., 807 Mercantile Bank Bldg.; first unit to cost \$400,000; DeWitt & Lemmon, Archts.; G. A. Griffin, contr. for excavation. (Previously noted.)

Hotels.

Ala., Birmingham—Jules Heymann, Augusta, Ga., Sam Baron, Augusta, and W. T. Wilson, Charlotte, N. C., are reported to expend \$100,000 to improve Hillman Hotel to consist of 44 additional bath rooms, redecorating, repapering, equipment, etc.; Colber Decorating Co., Birmingham, redecorating and repapering.

Ark., Harrison—E. M. Garvin is promoting erection of 50-room hotel; fireproof.

Fla., Fort Lauderdale—Geo. H. Hagar will erect \$50,000 hotel on Pompano Beach; 50 rooms.

Fla., Haines City—H. O. Estes will erect hotel on Ingraham Ave.

Fla., Miami Beach—Peter M. Chamberlain, Lessee of Marlborough Hotel, will erect 240-room hotel in Fairgreen subdivision to be known as Pelican Hotel; \$450,000; Moorish type; 4 stories; fireproof.

Fla., Miami Beach—C. W. Rush, Lancaster, Pa., and C. S. Reed, Pittsburgh, Pa., will erect apartment hotel at Jefferson Ave. and 5th St.; \$80,000.

Fla., Miami Beach—Jens Jensen and F. W. Hanson, of Chicago, will erect \$50,000 hotel at Pennsylvania Ave. and 11th St.; 3 stories; 30 apartments; construction by Mr. Jensen.

Fla., Miami Beach—M. A. Mummert and associates, Chicago, purchased 200x500 ft. lot known as Whitman tract, between Collins Ave. and ocean and will erect 200-room hotel.

Ga., Atlanta—C. W. Lane is reported to erect 7-story apartment hotel at Ponce de Leon Ave. and Juniper St.; \$500,000.

Ky., Henderson—Chamber of Commerce, Vance H. Evans, Secy., is promoting erection of \$200,000 hotel; 75 rooms; fireproof.

Mo., Jefferson City—Chas. Mayberry will erect Peabody Hotel, on S. Lafayette St.; \$14,000; 3 stories; brick; 15 rooms.

N. C., Chapel Hill—Carolina Club, Jno. Sprunt Hill, Durham, and others will erect hotel; \$150,000; 3 stories; brick; slate roof; hollow fireproof tile; hardwood and concrete floors; passenger elevator; ventilators; hot water or vacuum system of heat; plans by T. C. Atwood Organization. (Previously noted under Schools.)

N. C., Concord—Concord Realty Co. will incorporate with \$100,000 capital, take over St. Cloud Hotel and remodel.

N. C., Lexington—W. L. Hepler, Greensboro will erect 50-room resort hotel at Willmoore Springs, 10 mi. from Lexington.

Okl., Pauls Valley—J. C. Moody, Mgr., Whittington Hotel, Ardmore, will erect \$100,000 hotel; 75 rooms.

Tex., San Antonio—Texas Hotel Keepers'

Assn. incptd.; R. E. Pellow, Waco; L. B. Stoner, San Antonio; H. L. Dailey, Temple, and others.

Miscellaneous.

Ala., Bessemer—Resort—R. L. Zeigler and associates will construct amusement park at Rush's Lake to be named Pineview Beach; dance pavilion, boat house, bath houses, restaurant, etc.

Ala., Selma—Orphanage—Alabama Methodist Orphanage, O. V. Calhoun, Chrmn., Bldg. Comm., will erect Superintendent's residence; bids opened March 6; Jno. W. McKeel, Archt.

Fla., Haines City—Clubhouse—Col. Perlie A. Dyar will erect clubhouse for Gateway City Club; 2 stories and basement.

Fla., Palm Beach—Clubhouse—Everglades Club, Martin Sweeney, Mgr.-Secy., will erect addition to building.

N. C., Rocky Mount—Library—Rocky Mount Public Library Assn., F. E. Winslow, Chrmn., Bldg. Comm., will erect public library; \$15,000; 68x45 ft.; 1 story; brick, concrete, stone and limestone; hollow fireproof and interior tile; concrete and wood floors; galvanized iron cornices; vapor heat; contract let March 10; Wilson & Berryman, Archts., Columbia, S. C., Wilson, N. C. and Gastonia, N. C. (Lately noted.)

S. C., Manning—Stables—H. M. Thomas will rebuild sale stable to replace structure recently burned on Boyce St.; 100x200 ft.; brick.

Tex., Dallas—Museum—Texas Museum of Natural History, Ed. Sewell, Director, will erect building at Fair Park, Texas State Fair.

Railway Stations, Sheds, Etc.

Fla., Haines City—Atlantic Coast Line R. R., J. E. Willoughby, Ch. Eng., Wilmington, N. C., will erect passenger station; California style; pressed brick and stucco.

N. C., Charlotte—Norfolk-Southern R. R. Co., F. L. Nicholson, Ch. Engr., Norfolk, Va., plans to erect freight and passenger station at 6th and College Sts.; 2 stories.

Tex., Dallas—American Railway Express Co., F. S. Knouse, Local Agt., 1306 Commerce St., will erect 3rd-story addition to depot; \$100,000; 35,000 sq. ft. space; J. M. Dunham Co., Archt., 721 Olive St., St. Louis.

Schools.

Ala., Carbon Hill—County School Board, J. Alex. Moore, Supt., Jasper, will erect high school.

Ala., Mobile—School Commissioners will receive bids until March 14 at office Geo. B. Rogers, Archt., 1007 Van Antwerp Bldg., to erect school on Rickarby St., south of Government St.; separate bids for building proper, plumbing, heating and electrical work; plans and specifications at office archt. (Lately noted.)

Ala., Roanoke—School Board will rebuild Handley Public School noted burned.

Ala., Selma—School Board, Omer Carmichael, Supt., will erect junior high school; 250 ft. long; 2 stories; auditorium to seat 2000; Frank Lockwood, Archt., 121 Adams St. (\$100,000 bonds lately noted voted.)

Ala., Troy—State Normal School, Dr. E. M. Shackelford, Prest., rejected bids to erect training school; will have plans revised and call for new bids March 13; \$50,000; 153x184 ft.; 1 story; hollow tile and stucco; tile roof; concrete and tile foundation; concrete and wood floors; ventilators. (Lately noted.)

D. C., Washington—District Commissioners, Cuno H. Rudolph and others, 509 District Bldg., will receive bids until March 15 to erect addition to and alter Garrison School;

detailed information at Room 427, District Bldg.

Ga., Macon—Mercer University, Dr. Rufus W. Weaver, Prest., will erect \$100,000 stadium; accommodate 15,000 to 16,000.

Ga., Richland—City Board of Education will erect colored industrial school; brick and frame; construction under supervision of S. T. Carter.

Ky., Augusta—School Board will erect high school; 6 classrooms and auditorium-gymnasium; \$24,000 bonds voted. (Lately noted.)

Ky., Louisville—Leslie V. Abbott is preparing tentative plans for \$50,000 riding academy.

La., New Orleans—Soule College will erect \$25,000 addition to building at Jackson and Prytania Sts.; 2 stories; brick; 4 classrooms; A. S. Soule, Archt., 429 Carondelet St.; day labor.

La., Roanoke—Jefferson Davis Parish School Board, Jennings, will erect \$57,000 building; 2 stories; fireproof; brick and cement; stone trim; composition roof; 9 classrooms and auditorium; steam heat; electric lights; R. S. McCook, Archt., Lake Charles.

Md., Baltimore—Board of Awards, Mayor Wm. F. Broening, Prest., will erect negro high school group at Carey and Baker Sts.; \$750,000; 300x250 ft.; 3 stories; reinforced concrete, brick and stone; slag roof; wood and tile floors; steam heat; also remodel old buildings for shops; Owens & Sisco, Archts., Continental Bldg.

Md., Loch Raven—Maryland Training School for Boys receives bids until March 10 to erect cottage dormitory; 68x36 ft. with extension 42x12 ft.; 2 stories; reinforced concrete; accommodate 30; Wyatt & Nolting, Archts., Keyser Bldg., Baltimore; following contractors estimating: Thos. Hicks & Sons, 106 W. Madison St.; Tase & Norris, 106 W. Madison St.; E. G. Turner, 2133 Maryland Ave.; William E. Harn Co., 2314 Oak St.; Cogswell-Koether Co., 406 Park Ave.; Frainie Bros. & Haigley, 19 W. Franklin St.; Consolidated Engineering Co., Calvert Bldg.; M. A. Long Co., Horn and Horn Bldg., Guilford Ave. and Fayette St.; Jno. Waters Building Co., 23 E. Center St.; all Baltimore; heating in general contract.

Md., Towson—Maryland State Normal School will erect brick dormitory; 2 units; irregular dimensions; 2 stories and attic; accommodate about 125; steam heat; slate roof; wood floors; \$150,000; details being determined; Smith & May, Archts., Calvert Bldg., Baltimore. (Previously noted.)

Miss., Benoit—School Board will receive bids until April 4 to erect building; Kramer & Lindsley, Archts., Kress Bldg., Jackson.

Miss., Biloxi—City voted \$550,000 bonds to erect 2 brick schools, additions to ward schools, erect library or community building, improvements to streets, roadways,

Miss., Bogue Chitto—County Board of Education, L. P. May, Supt., Brookhaven, will erect school.

Miss., Duck Hill—School Trustees, E. E. Wilkins, Chrmn., will erect building; \$25,000; brick; Raymond B. Spencer, Archt., Memphis, Tenn.

Miss., Jackson—City will vote April 14 on \$175,000 bonds to erect junior high school, construct streets, bridges, drainage improvements, etc.; E. L. Bailey, Supt. of Schools, parks and playgrounds. Address The Mayor. (Lately noted.)

Miss., Tupelo—School Board will erect building; Kramer & Lindsley, Archts., Kress Bldg., Jackson.

Mo., Chillicothe—Board of Education plans

to erect high school; seating capacity 750 to 800; election March 16 on \$300,000 bonds.

Mo., Columbia—University of Missouri, Edw. E. Brown, Bus. Mgr., will erect armory; 350x130 ft.; drill hall, gallery and 6 classrooms; stone; Jas. P. Jamieson and Geo. Spearl, Archts., Arcade Bldg., St. Louis.

Mo., Sedalia—Board of Education will erect high school and Summitt grade school; T. W. Best and Clifford Johnson, Archts. (\$500,000 bonds lately noted voted).

Mo., Warsaw—Warsaw School Dist. Trustees will erect building; \$44,000 bonds voted.

N. C., Charlotte—City is considering election on \$1,000,000 school improvement bonds. Address Board of Education.

N. C., Davidson—Davidson College, Dr. W. J. Martin, Prest., will rebuild Watts dormitory noted burned; \$50,000.

N. C., Hickory—Board of Education plans to erect \$150,000 high school.

N. C., Laurel Hill—Laurel Hill School Trustees, Z. V. Pate, Chrmn., Laurinburg, will erect graded school; \$45,000; brick and frame; wood floors; Barrett roof; electric lights; steam heat; W. D. Harper, Archt., Masonic Temple, Florence, S. C.

N. C., Moulton—Lawrence County Board of Education will erect buildings at Landersville, Speake, Hatton, Mount Hope and Moulton; also additional room at Mount Moriah.

N. C., Raleigh—Shaw University, Dr. J. L. Peacock, Prest., will remodel old medical building for science department; \$65,000; H. P. S. Keller, Archt.

Okla., Bristow—Bristow School Dist. Trustees will erect high school and additions to present ward school; \$900,000 bonds voted

Okla., Enid—Southwestern Union Conference of Seventh Day Advent Church will erect \$60,000 to \$70,000 school.

S. C., Clio—Trustees of School Dist. No. 9, H. J. Bennett, Chrmn., will receive bids until March 15 for erecting and heating high school; \$40,000; 2 stories; 14 rooms; brick; wood floors; concrete foundation; tin or composition shingle roof; Willis Irvin, Archt., Lamar Bldg., Augusta, Ga.; plans on file at offices of Builders' Exchanges, Atlanta, Ga., Columbia, S. C., Raleigh, N. C. and Charlotte, N. C.; also offices Mr. Bennett and architect as above. (Lately noted.)

S. C., Gaffney—City plans election on \$100,000 bonds to erect 2 schools. Address Board of Education.

S. C., Greenville—Parker School Dist. Trustees, Thos. M. Bennett, Chrmn., plan to erect high school and extensions and additions to 11 schools in district; considering election on \$300,000 bonds; B. C. Barton, Supt. of County Schools.

Tex., Bangs—School Board will erect \$20,000 building; bonds voted.

Tex., Beaumont—City will receive bids until March 14 at office City Clerk to erect 2 junior high schools; 2 stories; fireproof; brick and tile; \$160,000 each; separate bids for heating, plumbing and wiring; bids on one or both of buildings; plans and specifications at office C. H. Page & Bro., Archts., Austin, or A. Babin, Asso. Archt., Beaumont.

Tex., Bellaire—Harris County School Board, Houston, will erect School for Girls; also lay water mains from present structure to building to be erected; bids opened March 5; plans and specifications at office Endress & Catto, Archts., 1006 Goggan Bldg.

Tex., Brownwood—City plans to vote on \$50,000 school improvement bonds. Address Board of Education.

Tex., Dallas—City will vote in April on

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

\$8,325,000 bonds including \$1,000,000 for schools. Address Board of Education.

Tex., Electra—Board of Education, B. M. Dinsmore, Supt., plans to erect high school; brick; concrete and steel; auditorium to seat 1000, gymnasium, manual training and domestic science rooms, dining room, classrooms to accommodate 600; election March 10 on \$196,000 bonds. (Lately noted.)

Tex., Grapeland—Grapeland Independent School Dist. Trustees, N. B. Granberry, Pres., voted \$25,000 bonds to erect building; brick. (Lately noted.)

Tex., Muleshoe—School Board will erect \$10,000 high school.

Tex., Muleshoe—School Dist. No. 4 voted \$10,000 bonds to erect brick school. Address Dist. School Trustees.

Va., Fort Myers Heights—Jefferson School Dist. plans to erect high school in Del Ray, enlarge Mt. Vernon elementary school, addition to Jefferson colored school and erect school in Virginia Highlands; Prof. Fletcher Kemp, Supt. of Schools, Rosslyn, Va.; Frank Upman, Archt., Woodward Bldg., Washington, D. C. (Lately noted.)

Stores.

Ark., Pine Bluff—J. F. Hilton will erect store at 10th and Ohio Sts. for Hilton Grocery Co.

D. C., Washington—C. Himelfart will erect 2-story brick store, 2025 14th St., N. W.; \$18,000.

Fla., Miami—Frederick H. Rand, Jr. will erect \$40,000 building, Second Ave. and Second St.; 150x100 ft.; 1 story; reinforced concrete and cement block; Jno. N. Bullen, Archt.; construction under supervision of C. D. Cochrane.

Fla., St. Petersburg—Harrison Hardware Co., J. F. Harrison, Pres., will remodel Arcade hotel for store.

Fla., Tampa—Bentley-Gray Dry Goods Co., will erect building at Pierce and Zack Sts.; 4 stories and basement; fireproof; also erect one or two-story garage and store rooms.

Fla., Tampa—Tampa Electric Co. will erect \$25,000 building; 2 stories; 60x150 ft.; concrete; Barrett specification roof; concrete floors and foundation; M. Leo Elliott, Archt.; Wayne Warfield, Engr. (Lately noted.)

Ky., Louisville—E. P. Thomas, Britling Cafeteria, will remodel 3-story brick building at 5th and Liberty Sts.; \$25,000.

Ky., Sergeant—D. B. Franklin Co. will erect store; \$10,000; contract in 2 weeks.

Miss., Waynesboro—Waynesboro Hardware Co. will erect store; brick.

Mo., Joplin—Dr. F. E. Rohan purchased Blendville Drug Store, 21st St. and Empire Ave. and will remodel.

N. C., Waynesville—S. J. Chulkofer, Meredith Apts., Richmond, Va., will erect 2 or 3 stores.

Tenn., Memphis—J. R. Ellis will erect 2-story brick store building at 407 Madison Ave.; \$20,000.

Tex., Austin—J. C. Penney Co. leased Belisch Bldg. and will expend \$10,000 to improve and remodel.

Tex., Greenville—Graham-Fagg Co., C. A. Fagg, Mgr., will erect 2-story addition to building.

Tex., New Braunfels—Mrs. Krause will erect 2-story reinforced concrete store and office building; Herbert S. Green, Archt., San Antonio.

Va., Richmond—O. S. B. Jones, 722 E. Main St., will erect 5 stores; \$12,000; 1 story; brick; tin roof; wood floors; brick founda-

tion; stoves; H. T. Barnham, Archt., 918 E. Franklin St.

Va., Roanoke—R. A. & F. A. Alouf will erect \$11,000 building, Campbell Ave. and 3rd St., S. E.; brick.

Va., Roanoke—J. D. Peters will erect 2-story brick store, Campbell Ave. and Wall St.; \$30,000.

Theatres.

Ark., Pine Bluff—Simons Estate will erect \$100,000 theater to be leased by Saenger Theater Co., of New Orleans; 67x148 ft.

Ark., Walnut Ridge—Swan Theater Co., S. C. Dowell, Pres., will erect theater; seating capacity 700.

Mo., Kansas City—H. A. Richardson will erect motion picture theater at Mill Creek Parkway and Archibald St.

Mo., St. Louis—Wm. Goldman, 6343 Waterman Ave., will erect Goldman's St. Louis Theater, Grand Blvd. and Morgan St.; \$325,000; 146x148 ft.; seat 2600.

BUILDING CONTRACTS AWARDED

Apartment Houses.

D. C., Washington—Harry Wardman will erect \$505,000 apartment building, 1624 R St., N. W.; 8 stories; brick; Wardman Construction Co., Contr.

Fla., Miami—J. W. Warren will erect 2-story apartment house, 559 N. W. 5th St.; about \$10,000; A. L. Sammons, Contr.

Okla., Tulsa—F. R. Herod will erect 2 apartment houses, W. 9th and 11th Sts.; 150,000; 15 five-room suites to each building; combination sink, electric dishwasher and drier; Lawrence E. Blue, Archt.-Contr.

Tenn., Chattanooga—Dr. E. C. Johnson, 8th St., will erect \$25,000 apartment house, Vaughn St.; brick; 94x46 ft.; 3 stories; wood floors; brick foundation; tar and gravel roof; Stewart Construction Co., Archt.-Contr., Frazer Bldg.; Terrell Electric Co., Cherry St., electrical work; J. B. Allen, plumbing; Martin & Warlick, brick work; J. Alex Moore, Supt., Jasper, will erect R. Vette, plaster; construction begun. (Lately noted.)

Tenn., Chattanooga—J. J. Wall, 524 McCallie Ave., will erect \$30,000 efficiency apartment house, 419 Oak St.; 5 suites of 2 and 3 rooms; one 6-room suite; bath to each bedroom; Stewart Construction Co., Contr.

Tenn., Memphis—P. W. Lytle will erect 6 brick veneer apartment houses, Tate and Walnut Sts.; \$125,000; hardwood floors; steam heat; built-in features; gas ranges, refrigerators, breakfast room fixtures and cabinets, sleeping porches; laundry and storage space in basement; 4 suites in each building; Hanker & Cairns, Archts.; C. W. Judd, Jr., Contr.

Association and Fraternal.

Ark., Fort Smith—Young Women's Christian Assn. will remodel buildings, 16-18 N. 7th St.; Haralson & Nelson, Archts.-Constr. Supervisors; P. L. Clayton, Contr.; Bruce Bros. plumbing.

Bank and Office.

N. C., Hendersonville—Ewbank & Ewbank will erect 2-story office building adjoining Citizens' Nat. Bank; A. L. Gurley, Contr.

N. C., North Wilkesboro—Bank of North Wilkesboro will erect 2-story brick building, B and 9th Sts.; Foster & Allen, Contrs.

N. C., Statesville—Statesville Furniture Co. will erect fireproof office building; con-

Tenn., Columbia—Crescent Amusement Co., Tony Sudekum, Pres., will remodel New Grand Theater; \$10,000 to \$12,000; Marr & Holman, Archts., Nashville.

Warehouses.

Fla., Pensacola—City, Jno. Frenkle, Clerk, will erect warehouse, 50x300 ft., extend Palafox Dock out about 900 ft. into bay and connect by turning track with railroad lines.

Fla., Miami—City, W. H. Wharton, Mgr., will erect addition to freight warehouse at city docks for Baltimore and Carolina Co.; 50x100 ft.

La., New Orleans—Pan-American Furniture Co. will erect 2-story warehouse at S. Robertson St. between Clio and Calliope Sts.; 50x150 ft.; frame and tin; Emile Weil, Archt., Whitney Central Bldg.

S. C., Manning—R. D. Cothran and J. D. Gerald will erect tobacco warehouse on Boyce St.; 90x80 ft.; iron clad.

crete and brick; green tile roof; contract let.

Tenn., Chattanooga—Provident Life & Accident Co., Mayor A. W. Chambliss, Vice-Prest., will erect 1-story addition to present 2-story office building and add another 2-story wing, both 33 ft. wide; erect 12-story section between the two, 58 ft. wide; fireproof; first 3 stories faced with terra cotta, balance vitreous gray brick; reinforced concrete or steel; terra cotta cornice and trim; green tile roof; marble floors and wainscoting in corridors; hardwood interior finish; R. H. Hunt & Co., Archt.; John Park & Co., Contrs. (Lately noted.)

Va., Abingdon—First National Bank will erect \$100,000 building; limestone; 50x85 ft.; 1 story; concrete foundation; Barrett roof; C. B. Kearfott, Archt., Bristol, Tenn.; John P. Pettyjohn & Co., Contr., Lynchburg; Fred Hoyer, Bristol, Tenn., heating and plumbing. (Lately noted.)

Churches.

Ark., Newport—Presbyterian Church, Rev. C. A. Raymond, Pastor, will erect \$25,000 building; gray brick; stone trim; kitchen, dining room, etc., in basement; J. D. Johnson, Contr., Hot Springs; plumbing, heating and electric wiring also let.

Fla., Jacksonville—Church of Holy Rosary, Rev. Father Lyons, Pastor, will erect \$60,000 building, Laura St. and College Ave.; Roman type; 60x90 ft.; wood floors; 1 story; concrete and brick foundation; slate roof; Jas. R. Walsh, Archt., Herkimer Bldg.; W. T. Hadlow, Contr., 15 Baldwin Bldg.; O. L. Florrid, Riverside Ave., electrical work; Chapman & Walker, plumbing; construction begun. (Lately noted.)

Fla., Quincy—Presbyterian Church will erect \$35,000 building; 2 stories; 64x90 ft.; rough face brick; concrete and wood floors; concrete foundation; Johns-Manville built-up roof over steel trusses; steam heat; city lights; Mark & Sheftall, Archts., Jacksonville; L. W. Cooper, Contr., Quincy; plumbing not let. (Lately noted.)

N. C., High Point—R. E. Stewart & Son has contract to erect church and Sunday school buildings for First M. P. Church; former 2 stories, 84x56 ft.; latter, 3 stories, 44x88 ft.; \$102,000; wood floors; concrete foundations; composition and slate roofs; Herbert B. Hunter, Archt.; Contr. desires bids on heating and plumbing.

Dwellings.

Ark., Jonesboro—Joe T. Trice will erect English type residence; Estes W. Mann, Archt.; W. A. McDaniel, Contr.; both Memphis, Tenn.

Fla., Tampa—Palm Avenue Baptist Church, Dr. A. M. Bennett, Pastor, will erect \$10,000 parsonage; Mr. Henderson, Contr.

Ga., Atlanta—W. O. Olston will erect \$30,000 residence, Andrews Dr.; fireproof; hollow tile and sponge stucco; Indiana limestone trim; tile and stone terraces; Pringle & Smith, Archts.; Barge-Thompson Co., Contr.

Ga., Macon—John D. Comer will erect Georgian type residence, Vineville and Pio Nono Aves., Vineville; 2 stories; hollow tile and brick veneer; 5 baths; Dunwoody & Oliphant, Archts.; W. F. Thames, Contr.

Ga., Waycross—W. H. Kwiecki, Bainbridge prepared plans for group of 25 six-room and bath dwellings; J. W. L. Yates, Contr., Thomasville. (Lately noted.)

La., New Orleans—Anthony Centanni will erect cottages at Dante and Belfast Sts.; Harry T. Parks, contr. at \$14,082.

Md., Baltimore—Chas. H. Buck, 1st floor Munsey Bldg., will erect 2½-story residence, 307 Goodwood Gardens, Roland Park; stucco over hollow tile; hardwood floors; hot water heat; Walter M. Gieseke, Archt., 65 Gunther Bldg.; Geo. W. Schoenhals, Contr., 101 S. Linwood Ave.

N. C., Wadesboro—Wade Manufacturing Co., W. P. Parsons, Pres., will erect 100 to 125 operatives' dwellings; bungalow type; 3 to 6 rooms each; Robert & Co., Archts.-Engrs., Atlanta; Thompson Bros., Contrs., Charlotte and Atlanta, Ga. (Lately noted.)

Va., Richmond—L. M. Cheatwood, 3208 Grove Ave., will erect 2 frame and stucco dwellings; 2721-23 Haynes Ave.; 2 stories; wood floors; 24x30x27 ft.; brick foundation; tin roof; pipeless furnace heat; electric lights; \$10,000; plans by owner; W. S. Cheatwood, Contr., 701 E. Leigh St.

Va., Richmond—T. Gray Haddon, 2510 W. Main St., will erect 2 dwellings, 2302-04 Beverly St.; 2 stories; brick; 40x31x25 ft.; wood floors; brick foundation; slate and tin roofs; hot water heat; electric lights; \$13,000; plans by owner; Davis Bros., Contrs., 2510 W. Main St.

Va., Richmond—R. O. Jones, 16 N. 28th St., will erect 6 dwellings, 3315-15 Delaware and 614 Overbrook, 620-22 Northside, and 3400-02 Second Aves.; 2 stories; stucco; 24 by 30 by 27 ft.; wood floors; brick foundations; tin roofs; pipeless furnace heat; electric lights; total \$31,500; plans by owner; W. S. Cheatwood, Contr., 701 E. Leigh St.

Government and State.

Ga., Columbus—Officers' Quarters—Constructing Quartermaster, Fort Benning, will erect 23 sets of 2-family houses for officers' quarters; 30x64 ft.; 2 stories; wood floors; concrete foundation; natural slate roofs; plans by Construction Service, Q. M. C.; A. Bentley & Sons Co. of Georgia, Jacksonville, Fla., Contr. at \$373,510; Walker Electric & Plumbing Co., heating, lighting and plumbing; Angelini & Tamburini, tile flooring; both Columbus; John S. Graham, plastering; F. B. Martindale, roofing and sheet metal; both Jacksonville. (Lately noted.)

Hospitals Sanitariums, Etc.

La., New Orleans—Touro Infirmary will erect 5-story building; 60x300 ft.; reinforced concrete and tile; composition roof; terrazzo, rubber and concrete floors; hollow fireproof and interior tile; ornamental terra cotta; metal doors; vaults; wire glass; heat from present plant; 3 elevators; Emile Weil,

Archt., 926 Whitney Bldg.; O. M. Gwinn Construction Co., Canal Commercial Bldg., contr. at \$750,000, including 2-story addition to nurses' home, remodeling and alteration of existing buildings and completion of 2-story addition to building, Prytania and Cliseux Sts. (Lately noted.)

N. C., Asheville—St. Joseph Sanatorium, Biltmore Ave., will erect \$160,000 addition to building; fireproof; 60x114 ft. and 47x121 ft.; hollow tile and concrete joist; concrete foundation; tile roof; plans by Rev. Father Michael, Os. B., Belmont Abbey, Belmont; Southeastern Construction Co., Contr., 129 Brevard St., Charlotte; Sugg & Britt, Asheville, heating and plumbing; construction begun. (Lately noted not to let contract.)

Va., Charlottesville—State will erect 4 buildings at Blue Ridge Tuberculosis Sanatorium, southeast of Charlottesville; Major Eugene Bradbury, Archt.; Charlottesville Lumber Co., Contr.

Hotels.

Fla., Miami Beach—Bay Shore Corp., incptd. with \$500,000 capital by O. M. Fowler, Prest., Indianapolis, Ind.; Carl G. Fisher, Miami, and R. K. LeBlond, Cincinnati, O., V.-Ps.; Thos. J. Pancoast, Secy-Treas., Miami; will erect Hotel Nautilus on Biscayne Bay; \$1,500,000; 200 rooms and 12 cottages in connection; fireproof; Schultze & Weaver, Archts., New York; Geo. A. Fuller Co., Contr., 940H Broadway, New York.

N. C., Statesville—Henkel Hotel Co. will erect \$100,000 building; 39x100 ft.; 6 stories; Barrett roof; concrete foundation; Louis H. Asbury, Archt.; J. A. Gardner, Contr.; both Charlotte; Grinnell Co., New York, heating.

S. C., Charleston—Edw. J. Murphy will erect Fort Sumter Hotel at foot of King St.; \$650,000; 7 stories; 100x170 ft.; fireproof; reinforced concrete; tile and concrete joists; pile foundation; reinforced concrete and wood floors; tar and gravel roof; G. Lloyd Preacher & Co., Archts., Healey Bldg., Atlanta, Ga.; G. E. Beaman, Contr., Raleigh, N. C. (Lately noted.)

Tenn., Johnson City—Johnson City Hotel Co. will erect \$460,000 hotel; 9 stories; 120 rooms; reinforced concrete, hollow fireproof and interior tile; tar and gravel roof; cement and terrazzo floors; metal doors; ornamental terra cotta; steel sash and trim; wire glass; mail chutes; vault lights; 2 electric elevators; W. L. Stoddart, Archt., 9 E. 40th St., New York; E. W. Minter Co., Inc., Contr., 115 Broadway, New York. (Lately noted.)

Tex., Dallas—M. C. Cameron will erect \$100,000 hotel on Bryan St.; 3 stories; brick; 50x150 ft.; 3 stores on first floor; 44 rooms, 12 baths and 4 showers above; F. J. Woerner Co., Archts.; Christy-Dolph Constr. Co., Contr.

Miscellaneous.

Md., Baltimore—Clubhouse—City Club of Baltimore, Inc., Caswell Hotel, will erect \$400,000 building, St. Paul and Saratoga Sts.; 110x70 ft.; 6 stories; reinforced concrete and hollow fireproof tile; wood, tile and marble floors; slag roof; metal doors; ventilators; ornamental terra cotta; steel sash and trim; wire glass; Clyde N. & Nelson Friz, Archts., 2010 Lexington Bldg.; Herman F. Doeelman, Struc. Engr., 507 N. Charles St.; Chas. L. Reeder, Consit. Engr., 916 N. Charles St.; J. Henry Miller, Inc., Contr., Eutaw and Franklin Sts. (Lately noted.)

S. C., Greenville—Clubhouse—Country Club will erect \$20,000 building; 116x50 ft.; steam

heat; J. E. Sirrine & Co., Archts.; J. R. Owens, Contr. (Lately noted.)

Tex., Dallas—Clubhouse—Dallas Athletic Club, T. L. Monogan, Executive Secy., will erect building at Elm, St. Paul and Live Oak Sts.; Georgian renaissance type; 14 stories including basement; 200x300 ft.; reinforced concrete with steel superstructure faced with terra cotta, face brick and Bedford stone; 6 bowling alleys; main dining room, 44x100 ft.; 2 stories; gymnasium, 46x106 ft.; swimming pool, 30x75 ft.; 6 upper floors for bedrooms with private bath, shower or tub; Lang & Witchell, Archts., American Exchange Natl. Bank Bldg.; Central Contracting Co., contr., at \$878,000; plumbing, heating, ventilating, wiring, etc., about \$600,000; furnishings and equipment, \$300,000. (Previously noted.)

Schools.

D. C., Washington—District Commissioners, Cuno H. Rudolph and others, District Bldg., will erect 8-room addition to and remodel Lovejoy School, 12th and D Sts., N. E.; \$145,000; Schneider-Spleidt Co., Contr.

Md., Baltimore—Johns Hopkins University, Dr. Frank Goodnow, Prest., will erect \$600,000 chemical laboratory at Homewood; U-shape; main part of building, 147x158 ft.; 3 stories; colonial brick; tile roof; Carrere & Hastings, Archt., 45th St. and Vanderbilt Ave., New York; Consolidated Engineering Co., Contr., Calvert Bldg., Baltimore. (Lately noted.)

N. C., Indian Trail—School Board will erect building; J. C. Gordon, Contr.

S. C., Lake City—School Board, W. W. Singletary, Secy., will erect high school; \$54,000; W. J. Wilkins & Co., Archts.; Haynsworth & Stuckey, Contrs.; both Florence; Bryce Supply Co., heating and plumbing. (Lately noted.)

S. C., Pelzer—Pelzer Manufacturing Co. will erect grammar school and moving picture theater; J. E. Sirrine & Co., Engrs., Greenville; Fiske Carter Construction Co., Contr., Greenville; also erect central heating plant for auditorium, high school, grammar school and moving picture theater. (Lately noted.)

Tenn., Memphis—Southwestern Presbyterian College, Dr. Chas. E. Diehl, Prest., Clarksville, will erect administration building to be known as Palmer Memorial; \$150,000; stone; Henry C. Hibbs, Archt., Nashville; Jones & Furbringer, Supervising Archts., Memphis; Kaucher & Hodges, Contrs., Memphis. (Lately noted.)

Va., Lexington—Virginia Military Institute, Gen. E. W. Nichols, Supt., will erect addition to barracks; \$135,000; 200x40 ft.; 4 stories; brick and stucco; extend heating plant; Carneal & Johnston, Archts., Richmond; J. L. Crouse, Contr., Greensboro, N. C. (Lately noted.)

Va., Lynchburg—Randolph-Macon Woman's College will erect \$50,000 dormitory; 3 stories and basement; brick and concrete; composition floors; Stanhope S. Johnson, Archt.; Jno. P. Pettyjohn & Co., Contrs.

Stores.

Miss., Natchez—Postlethwaite & Son, Commerce and Franklin Sts., will remodel both exterior and interior of building; plate glass front; metal canopy; Bost & Moss, Contrs.

N. C., Charlotte—Cochran & Ross will erect \$15,000 store and apartment building, 6th and Graham Sts.; 2 stories; brick; plans by W. G. Ross; J. D. Straupe, Contr. (Lately noted.)

N. C., Greensboro—Rev. S. M. Rankin, 130

Tate St., will erect store on N. Elm St.; \$11,990; brick and tile; A. L. Schlosser, Contr.

Tex., San Antonio—Mrs. Mary Ladon will erect building at Main Ave. and Dewey St. for 3 stores; 56x97 ft.; tile and brick; S. A. Freeborn, Contr.

Tex., San Antonio—I. Tobias will erect \$26,000 store at W. Commerce and Pecos Sts.; 1 story and basement; reinforced concrete; Jno. M. Marriott, Archt.; Wilson & Ferguson, Contrs. (Lately noted.)

Tex., San Antonio—P. A. Vance will erect

store in 600 block Avenue C; 57x89 ft.; brick and tile; S. A. Freeborn, Contr.

Va., Richmond—A. L. Strause, Box 1761, will erect \$22,000 store; 3 stories; brick; wood floors; brick foundation; slag roof; steam heat; electric lights; plans by owner; L. C. Jenkins, Contr., 1412 W. Broad St.

W. Va., Wheeling—Locke Shoe Co., Wm. H. Pfarr, Prest., will remodel building at 1506 Market St.; \$10,000; plate glass windows, etc.; Lee Woods & Son Co., Contrs.

Warehouses.

N. C., Charlotte—Charlotte Bonded Warehouse Co. will erect warehouse on N. Graham St.; \$20,000; 100x200 ft.; J. Y. Orders, Contr.

Tenn., Chattanooga—Casey & Hedges Co., M. M. Hedges, Prest., will erect \$30,000 warehouse; 150 ft. square; also erect addition to present warehouse; Chambers & Son, Contrs.

W. Va., Huntington—Goodman Manufacturing Co., Chicago, will erect 2-story brick building on Second Ave. between 8th and 9th Sts., for warehouse and repair shop for coal cutting machines and electric locomotives; E. C. Hines, Contr.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Agricultural Implements—See Miscellaneous Supplies.

Architectural and Structural Work, etc.—Board of Education, City of Athens, Ga.—Bids until March 16 for general contract covering architectural and structural work on Boys' Senior High School; also for mechanical contract work covering electrical, plumbing, heating and ventilating in same school; plans with Supv. Archt., A. Ten Eyck Brown, 717 Forsyth Bldg.; Hentz, Reid & Adler, Archts.

Asphalt—Paul J. B. Murphy, City Mgr., Radford, Va.—Asphalt for bituminous macadam paving.

Automobile Accessories—Thos. M. White, Box 2462, Memphis, Tenn.—To purchase 30 by 3 and 30x3½ Ford type auto wheels, 30x3 and 30x3½ non skid or ribbed tread fabric casings, 30 x 3 and 30 x 3½ inner tubes and carbon steel automobile springs.

Bells (Electric)—Automatic Fire Extinguisher Preventer & Insurance Co., Wichita, Kan.—Prices on electric bells using 110 volt A. C. current, bells to be of 2½-in. gong.

Belting—See Pumps, etc.

Bells (Sleigh)—J. I. Hahn, 19 St. Emanuel St., Mobile, Ala.—To contract for mfrs. of sleigh bells.

Blower—High Point Machine Works, Inc., High Point, N. C.—To purchase No. 6 Sturtevant blower, second-hand.

Blower (Fan Pressure)—City of St. Petersburg, Fla.—Bids until March 12 for one electrically driven fan pressure blower; H. T. Davis, Director of Finance.

Boiler—Chas. J. Shelverton, Austell, Ga.—Prices on boiler for woodworking plant.

Boiler—M. E. S. Posey, Box 668, Ashland, Ky.—125 H. P. boiler.

Boiler (Tubular)—James B. Porter, Norfolk, Va.—100 H. P. horizontal return tubular boiler, second-hand.

Boilers—Taylor-Parker Co., Chas. A. McLean, Box 1183, Norfolk, Va.—150 H. P. return tubular boiler complete with stacks; also marine boiler for steeple compound engine 8 and 14x14 for about 140 lbs. steam pressure; will consider water tube, Scotch, leg or dog house type.

Boilers (Water Tube)—Sewerage & Water Board, A. G. Moffat, Secy., New Orleans, La.—Bids until April 26 to furnish 1500-1800 H. P. water tube boilers.

Brass and Steel Accessories—H. C. Bryant, Potsdam, N. Y.—To correspond with mfrs. of brass and steel corners, folding table braces, small letters or numbers in brass and nickle used on pocketbooks, bags, and wooden brushes, ready for attaching.

Bridge Construction—Warren County Supvs., J. G. Shepard, Clk., Vicksburg, Miss.—Bids opened March 8 for 4 creosoted timber

trestles on North Scenic Highway, between Haynes Bluff and Yazoo County line; 64,000 ft. B. M. creosoted lumber; plans, etc., on file and from Warren County Highway Engr.

Bridge Construction—State Highway Comsn., Frankfort, Ky.—Bids until March 14 to build 2 bridges as follows: Caldwell County, on Marion-Princeton road, over Livingston Creek, between Caldwell and Crittenden Counties; two 30-ft. concrete spans, concrete abutments and center pier; State Proj. No. 10; Rowan County, on Midland Trail, Morehead to Carter County line, over Trip-left Creek, superstructure and substructure; 100-ft. steel pony truss; F. A. Proj. No. 67; plans, etc on file; Joe S. Boggs, State Highway Engr.

Building Material—M. A. Long Co., Horn Building, Gulfport Ave. and Fayette St., Baltimore, Md., is estimating on addition to building for Baltimore Eye, Ear & Throat Hospital and desires sub bids and estimates until March 13; building 50 by 70 feet, 3 stories, brick.

Buildings (Steel)—State Road Commission of West Virginia, Office of Purchasing Dept., Charleston, W. Va.—Bids until March 6 for following steel buildings: One 24x60 ft. of 6-10 ft. bays with doors along one entire side for garage and machinery storage, f. o. b. Spencer, W. Va.; one 24x60 ft. with doors along one entire side, 6-10 ft. bays, used as garage, f. o. b., Parkersburg, W. Va.; one 25x40 ft. with doors along one entire side, 4-10 ft. bays, for garage and equipment storage, f. o. b. Sistersville, W. Va.; one 24x40 ft. with doors along one entire side, 4-10 ft. bays for garage and storage, f. o. b. Wellsburg, W. Va.

Burners (Wickless Kerosene)—J. S. Wilson, Bailey, N. C.—To correspond with mfrs. of wickless kerosene burners and other oil burning equipment, such as crude oil, etc.

Cable Tool (Rig)—McLemore Cove Oil & Gas Co., 39 Chamberlain Bldg., Chattanooga, Tenn.—Prices on Standard rig cable tool.

Cars (Dump)—J. W. Pierce, Orebank, Va.—Two 1 yd., 24-in. gauge Koppel dump cars.

Cars—Pennsylvania Equipment Co. (Mchy. Dealers) Norwood Station, Pa.—To purchase one railroad club car and one all steel modern railroad private or official car.

Cement—See Street Paving Equipment.

Chair Machinery—Chas. J. Shelverton, Austell, Ga.—Prices on latest improved chair mchy. including small saw mill outfit.

Chemical Toilets—Joseph H. Jacobs, 52 Gunther Bldg., Baltimore, Md.—To correspond with mfrs. of chemical toilets.

Clay Loading Machine—W. H. Smith Secy., Meadow Brick Co., Four Oaks, N. C.—Prices on clay loading machine.

Condensers—See Pine Products Plant Equipment.

Cotton Mill Machinery, etc.—W. T. Pittman, Box 1455, Dallas, Tex.—Complete equipment for making fabric, duck, etc., also a yarn mill for hosiery, etc.

Crane—Pennsylvania Equipment Co. (Mchy. Dealers) Norwood Station, Pa.—To purchase one 10 ton 3 motor overhead crane with 42 ft. span.

Crate and Basket Machines—H. A. Thorn-dike, Orlando, Fla.—To correspond with mfrs. of crate and basket machinery.

Curb Stop—See Valve Boxes, etc.

Cypress—See Lumber—W. F. Ellis.

Derrick (Guy)—J. W. Pierce, Orebank, Va.—One 2 to 3 ton capacity guy derrick.

Disposal Plant—W. J. Foster, Supt. Street Cleaning Dept., Jacksonville, Fla.—Bids until Mch. 15 to construct disposal plant; approx. cost \$65,000.

Dredging—U. S. Engr. Office, Room 710, Army Bldg., 39 Whitehall St., New York—Bids until Mch. 15 to dredge in Newtown creek, New York; also on Mch. 29 for dredging and rock removal in East river, N. Y.

Dredging—U. S. Engr. Office, Detroit Mich.—Bids until March 21 for dredging below locks, St. Mary's river, Mich; also bids March 21 for dredging Vidal Shoals, St. Mary's river.

Electrical Supplies—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Mch. 10 to furnish electrical supplies, including galvanized wire, meters, porcelain cleat receptacles, lamp fixtures, reflectors, etc. Delivery Marine Barracks, Quantico, Va.; Sch. 346.

Elevator (Freight, Electric)—Treasury Dept., Supvg. Archt.'s Office, Washington, D. C.—Bids until March 15 to install complete one full magnet electric freight elevator for U. S. Courthouse and Postoffice at Altoona, Pa.

Engines and Boilers—Brown-Harry Co., Contrs., Gastonia, N. C.—Catalogs and descriptive literature on heavy duty oil burner engines and boilers for both heat and power.

Engine—James B. Porter, Norfolk, Va.—Second-hand stationery engine, from 60 to 75 H. P.

Engine—Chas. J. Shelverton, Austell, Ga. Prices on engine for woodworking plant.

Engine—M. E. S. Posey, Box 668, Ashland, Ky.—Will probably purchase engine.

Engine (Hoisting)—J. W. Pierce, Orebank, Va.—35 H. P. steam hoisting engine D. C., D.D. 30-in. drum.

Engines—Taylor-Parker Co., Chas. A. McLean, Box 1183, Norfolk, Va.—Corliss engine 20 or 22x42, Allis-Chalmers preferred; Corliss or slide valve engine 125 to 150 H. P.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fire Alarm System.—V. H. Idol, Madison, N. C.—Prices and details on electric fire alarm systems, probably 12 or 15 alarm boxes with bell or siren whistle.

Flusher (Street).—City of Asheville, N. C., J. H. Schoepf, Purchasing Agt.—Bids until Mch. 15 on one 1200 gal. capacity motor driven street flusher.

Foundry Equipment.—Thos. M. White, Box 2462, Memphis, Tenn.—To purchase special drop forgings; commercial body malleable fittings, bolts and nuts, U bolt and nuts, $\frac{3}{4}$ -in. extra heavy black iron pipe, coil springs, $\frac{3}{4}$ -in. cold rolled steel rounds.

Furniture.—See Miscellaneous Supplies.

Furniture (Hotel) and Equipment.—The Proprietor, Hotel Manning, Manning, S. C.—Prices on furniture and furnishings for 25 bedrooms, one writing room, lobby and office, dining room and kitchen, floor covering, curtains, beds, mattresses, tables, chairs, refrigerators, range, etc.

Garage.—See Buildings (Steel).

Gate House.—City of Atlanta, Ga., J. N. Landers, Purchasing Agt.—Bids opened March 6 to furnish materials and construct gate house with appurtenances on the Howell Mill road, consisting of 60-in. pipe across connection between reservoirs, connecting piping to supply main gate house, installing sluice gates together with miscellaneous appurtenances and connections to the present system; plans at office of Gen. Mgr. of Atlanta Water Works, City Hall, and P. H. Norcross.

Generator.—M. E. S. Posey, Box 668, Ashland, Ky.—Will probably purchase generator.

Gravel.—Louisiana Highway Comsn., Raymond Bldg., Baton Rouge, La.—Bids until March 13 for 6692 cu. yds. washed gravel, and 6698 cu. yds. sand-clay gravel, containing 40 per cent stone; plans, etc. on file; J. M. Fourmy, State Highway Engr.

Hardware.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Mch. 12 to furnish 80 gross flat head square nut assorted stove bolts; 65 gross carriage bolts full square underhead square nuts finished points; 250 lbs. wrought iron assorted washers; 60 cans boiler X liquid in 1 pt. cans; 432 wrought steel round neck bolts; 5-in. brass knobs; 432 galvanized hinged hasps; $4\frac{1}{2}$ -in. of 7 screw poles for No. 7 screws; 432 reversible locks; 288 wardrobe locks; 144 plain cast bronze foot bolts; 48 chest handles; 48 hammock hooks, etc.; delivery to Post Quartermaster, Marine Barracks, Quantico, Va. Sch. 346.

Heater (Gas).—Newman Machine Co., Jackson St. and Southern Ry., Greensboro, N. C.—To purchase gas heater or forge for melting Babbitt metal.

Heating System.—A. W. Chamberlin, Daytona, Fla.—Data on heating system known as Kleen Heat.

Hosiery Mill.—See Cotton Mill Machinery, etc.

Ice Cream Equipment.—Geo. M. Shelor, Secy., Culpeper Creamery Co., Culpeper, Va.—Prices on new or second-hand ice cream equipment.

Ice Manufacturing Machinery.—Culpeper Creamery Co., Geo. M. Shelor, Culpeper, Va.—Prices on new or second-hand ice manufacturing machinery.

Ice Plant.—J. L. Dorsey, Fayetteville, Tenn.—Complete equipment for 20 to 40-ton capacity ice plant.

Incinerator.—City Commrs., W. A. Evans, Chmn., Jacksonville, Fla.—Bids until March 15 to furnish labor, materials and construct complete one or more incinerators, daily capacity not less than 80 tons garbage, etc.

Light and Water Plant Equipment.—City of Jasper, Ind.—G. P. Wagner, Mayor, bids until Mch. 14 for following equipment: 300 H. P. water tube boiler; 500 K. W. turbo-generator set; 500 K. V. A. engine driven generator set; two centrifugal pumps and motors to handle 800 G. P. M. 26 ft. head; one 125 x 5-ft. radial brick stack; steam-piping and addition to present building; James R. Lowe, Consit. Engr., 111 N. 3rd St., Louisville, Ky.; specifications with City Clk., Jasper.

Locomotive.—H. L. Lawton, Lena, S. C.—To trade one 20 ton Porter locomotive for one 26 ton Lima Shay locomotive; or would purchase second-hand Shay.

Locomotives.—R. P. Johnson, (Mchy. Dealers) Wytheville, Va.—Dealers prices on 18 to 25 ton standard gauge, rod locomotive; also 30 to 35 ton, 36-in. gauge Climax or Shay geared locomotive; good second-hand condition.

Locks.—U. S. Engr. Office, Box 72, Louisville, Ky.—Bids until April 10 to construct lock No. 47, Ohio river at Newberg, Ind.

Lumber.—W. F. Ellis, Ashland, Ky.—Prices on pecky cypress and other lumber for 16 bungalows.

Metal (Fusible).—Automatic Fire Extinguisher Preventer & Insurance Co., Wichita, Kan.—Prices on fusible metal that will fuse at not over 150 degrees heat.

Miscellaneous Supplies.—Peoples Supply Co., (Mchy. Dealers) 208 Moore Bldg., Richmond, Va.—To correspond with mfrs. of stoves and ranges; agricultural implements; furniture and dairy supplies.

Miscellaneous Supplies.—Treasury Dept., Bureau of Engraving and Printing, Washington, D. C.—Bids until April 2 to furnish dextrine; oils; textiles; dry colors; paper boxes; paper and check paper; for fiscal year beginning July 1, 1923; specifications with Louis A. Hill, Director.

Miscellaneous Supplies.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until Mch. 13 to furnish steel bars; soft steel wire; steel machine and track bolts; galvanized iron fittings; brass wood screws special bronze; shop's range; pin type insulators; canvas hose; inner tubes; asbestos and rubber steam packing; tarred ship felt; vitrified china-ware; toiler soap; paraffin wax; turpentine; shellac; insulating paper, etc. Blank forms and information (Circular 2315) on application to offices of Panama Canal; Asst. Purchasing agts. at Fort Mason, San Francisco, Cal.

Mixer (Building).—Fredericksburg Motor Co., Fredericksburg, Va.—Prices on 14-S and 21-S bulding mixer on skids with batch hopper and water tank; good used condition.

Mixers (Concrete).—See Street Paving Equipment.

Monolite System.—City of Huntington, W. Va., A. R. Hunt, Clk.—Bids until March 13 for furnishing all materials and doing all work necessary to install Monolite system on portions of Eight St. and Fifth Ave.

Motor.—M. E. S. Posey, 668, Ashland, Ky.—125 to 150 H. P. motor.

Motors.—Geo. M. Shelor, Secy., Culpeper Creamery Co., Culpeper, Va.—Prices on new or second-hand motors.

Motors (Water Tube).—City of Holly Springs, Miss.—Bids until Mch. 20 for two 200 H. P. water tube boilers, 150 lbs. working pressure, erected complete in the present boiler rooms; Lester G. Fant, City Atty.

Paints, Brushes and Glass.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until March 9 to furnish 200 gals. black

asphaltum paint; 500 lbs. putty; 200 gals. flat white paint in 1 gal. containers; 5000 gals. cream wall paint in 50 gal. bbls.; 200 gals. black paint in 1 gal. containers; 200 gals. spar varnish in 1 gal. containers; 300 gals. white enamel, 1 gal. containers; 250 lbs. burnt umber in oil, 5 lb. containers; 1000 lbs. natural color 25 lbs. container; 500 gals. battleship grey paint, in 1 gal. container; 12 camel hair lettering brushes, No. 4; 200 paint brushes, W-2; 200 brushes, B-3; 300 long handle flat brushes; 24 steel wire handled brushes; 24 flue cleaners; 2025 glass window lights, 10x16-in.; and 80 rough glass lights, 14x20-in. thick semi opaque; delivery Marine Barracks, Quantico, Va. Sch. 337.

Paper (Printing).—Commrs. of Public Printing, Auditor's Office, Capitol Annex, Charleston, W. Va.—Bids until March 10 to supply state with printing paper and stationery for period beginning March 10 and ending Aug. 1, 1923; Geo. M. Ford, Supt. of Schools.

Paving.—Boyd A. Bennett, City Mgr., Charlottesville, Va.—Bids until March 24 to grade, curb, pave and resurface 120,200 sq. yds. of streets; plans, etc. from Engr.

Paving.—H. T. Davis, Director of Finance, St. Petersburg, Fla.—Bids until March 12 to grade and lay about 35,000 sq. ft. one course concrete sidewalks and cement blocks; plans, etc., on file.

Paving.—City, E. D. Bass, Commr. of Streets and Sewers, Chattanooga, Tenn.—Bids until March 12 to lay concrete curbs and cement sidewalks in certain districts; plans, etc. on file.

Paving.—Board of Commrs., F. A. Saunders, Commr. of Streets and Public Works, Pensacola, Fla.—Bids until March 9 to construct, reconstruct, repair, etc., sidewalks; plans, etc., from Anita O. Villar, Acting City Clk.

Paving.—City of St. Petersburg, Fla.—Bids until March 12 to pave Fourth St., South Ingleside Ave. to Lakeview Ave.; H. T. Davis, Director of Finance.

Paving.—G. M. Williams, Director of Public Works, Savannah, Ga.—Bids opened March 7 to pave Maupus Ave., from Reynolds to Habersham Sts.; plain concrete; plans, etc., on file. (Lately noted.)

Paving.—Jefferson City, Mo., F. E. Ross, City Engr.—Bids open March 9 for paving portions of following streets: Atchison, Adams, Hart, Mulberry, Elm, Berry, Ashley, Lafayette, Dunklin, Miller Sts., and Union, Woodlawn, Park Aves.; all patching and surface treating.

Paving.—Earl B. Horner, Burlington, N. C.—Bids until March 12 to grade and pave certain streets with sheet asphalt or cement concrete; 17,500 sq. yds. pavement; 11,000 lin. ft. combined concrete curb and gutter; storm drains and accessories; plans, etc., on file or from Ludlow Engrs., Winston-Salem, N. C.

Paving and Sewer Construction.—Allan W. Andleton, Mayor, Enfield, N. C.—Bids until March 21 to improve streets; 25,000 sq. yds. sheet asphalt or other bituminous pavement on concrete base, 17,500 lin. ft. combined concrete or granite curb and gutter, 8500 sq. yds. concrete sidewalks; also 5500 lin. ft. vitrified pipe storm drains, 20 storm drain manholes, 50 catch basins, etc.; plans, etc., from Wm. C. Olsen, Engr., Kinston, N. C.

Paving.—J. L. Morgan, Mayor, Pikeville, Ky.—Bids until March 10 to pave 16 streets and 20 alleys as follows: Cline, Steele, River View Drive, Myra-Barnes Ave., Sycamore, Scott, 2nd, 3rd Sts., etc.; plans, etc., on file; J. M. Hatcher, City Clk.

Paving.—F. E. Ross, City Engr., Jefferson City, Mo.—Bids until March 9 to repair and surface treat following streets: Manilla between Main and McCarty; Olive, from High to Capitol; High, from Mulberry to Walnut, and from Chestnut to Cherry; Oak, from Union Ave. to Tyler; Brooks from Main to Miller; Jackson, from Dunklin to Atchison; Monroe, from High to McCarty, and Miller to Dunklin; Atchison, from Madison to Mulberry, and Madison to Monroe; Dunklin, from Monroe to Jackson, and Monroe to Madison; Michigan St. from St. Mary's Blvd. to Dunklin; Adams, from Dunklin to Ashley; Cherry, from Miller to McCarty, and Capitol to High;

Washington from Miller to Dunklin, Atchison to Ashley, and McCarty to Miller; Ohio, from St. Mary's to Park Blvd.; Hub, from Main to McCarty; Mulberry from Elm to McCarty; Pine from High to Capitol; Fulkerson from Main to High; Miller, from Mulberry to Broadway; Tyler, from Adams to Monroe; Walnut from High to McCarty; Madison, from Atchison to south end of pavement; McCarty, from Monroe to Locust; Hickory, from Monroe to Jackson; crushed stone, gravel, sand, bituminous material, etc.

Paving and Sewer Construction.—D. H. Hamrick, City Clk., Clarksburg, W. Va.—Bids until March 13 for paving following streets: W. Main from 5th to Pike at Angle Inn, Traders Ave. from 3rd to 4th, and Sehon to Chestnut; 8000 sq. yds. 3-in. vertical fibre brick; 1200 cu. yds. concrete base; 6500 lin. ft. 6 and 8-in. armored curb; also construct sanitary sewer system in Kelley Hill and Northview Sections; 9 inlets and 35 manholes; plans, etc., on file and from City Engr.

Paving and Sewer Construction.—Comms. of Curb, Gutter and Plumbing Dist. No. 295, and Street Improvement Dist. 296, Little Rock, Ark.—Bids open March 2 for paving with Trinidad sheet asphalt streets in district. approx. quantities are 6000 cu. yds. grading; 8000 lin. ft. combined curb and gutter; 1300 lin. ft. storm sewer; 5 catch basins; 15,000 sq. yds. of 2½ in. sheet asphalt on 4-in. concrete base; 1200 sq. yds. of 6-in. concrete alleys and gutters; 3700 water and sewer connection; Dickinson and Watkins, Engrs., 610 Boyle Bldg.

Pine Products Plant Equipment.—Pine Products, Room 1703, 90 West St., New York City.—To correspond with mfrs. of retorts, condensers, and other apparatus used in construction of pine products plant (destructive process.)

Piping.—Automatic Fire Extinguisher Preventer & Insurance Co., Wichita, Kan.—Prices on common black and galvanized piping up to 2-in.

Power Apparatus.—Calhoun Machinery Exchange (Mchy. Dealers), El Reno, Okla.—Catalogs and illustrations of horse, dog or sheep power apparatus suitable for driving equipment requiring from 1½ to 2 H. P.; prices FAS New York; crated for export.

Power Plant Machinery and Electric Line Material.—City of Jacksonville, Fla., Frank H. Owens, Chrmn. Comms. Public Utilities.—Bids until March 19 for following equipment: one 12,000 K. W. turbo generator; surface condensing equipment; improvements for surface condensing equipment; admiralty condenser tubes; switchboard additions and improvements, for generating and sub-stations; constant current transformers; power transformers; reactors and transformer rewinding material; improvements for boiler and superheaters; oil burners and furnace material; force draft fans; centrifugal boiler feed pump; centrifugal sump pumps; synchronous motors;

two storage batteries; machine shop equipment; lead covered cable and jointing material; copper wire; form of contract, etc. with Scofield Engineering Co., Const. Engrs., Phila., Pa.

Press (Self Feeder).—See Printing (Job) Plant Equipment.

Printing (Job) Plant Equipment.—W. M. Brice, Box 434, Gainesville, Ga.—Bids until April 1. for typesetting machine, self-feeder press, punching machine, wire or thread stitcher; also small ruling outfit to do ruled printing work.

Pulley.—See Pumps, etc.

Pump (Steam).—J. W. Pierce, Orebank, Va.—One 6x16 steam pump.

Pumps, etc.—Geo. M. Shelor, Secy., Culpeper Creamery Co., Culpeper, Va.—Prices on new or second-hand pumps, belting, pulleys, etc.

Rails, etc.—Canaveral, Orlando & Southwestern Railroad Co., J. F. Ange, Prest., Orlando, Fla.—To purchase rails and other equipment to build 175 mi. standard gauge steam railroad.

Rails, etc.—J. W. Pierce, Orebank, Va.—35 lb. rails, 400 ft. of tracking.

Resaw (Band).—Taylor-Parker Co., Chas. A. McLean, Box 1183, Norfolk, Va.—54-in. band resaw.

Re-saw (Circular).—James B. Porter, Norfolk, Va.—Small circular re-saw that will rip an 8-in. board, used equipment.

Retorts.—See Pine Products Plant Equipment.

Road Construction.—Nueces County, F. A. Tompkins, County Auditor, Corpus Christi, Tex.—Bids until March 13 for 2 roads as follows: 11.71 mi. S. H. No. 12; 17,600 cu. yds. first course mud shell, 21,800 cu. yds. second course gravel, 124,000 sq. yds. cold natural limestone rock asphalt; 10.97 mi. S. H. No. 12; 10,000 cu. yds.; first course mud shell, 20,000 cu. yds.; second course gravel, and 116,000 sq. yds. cold natural limestone rock asphalt; plans, etc., on file.

Road Construction.—Augusta County, Bd. of Supvrs., Staunton, Va.—Bids until March 15 to build 3 roads as follows: 4 mi. Weynesboro-Lyndhurst road, South River Dist., waterbound or bituminous macadam; 2 mi. Deerfield road, Pasture Dist., from end of present macadam west; compacted gravel macadam; 2400 cu. yds. grading; 2 mi. Spottswood-Newport road, Rivershead Dist., from State Road No. 3 to Spottswood; crushed rock macadam road 3500 cu. yds. grading; plans, etc. from County Road Supt., or State Highway Comsn., Richmond, Va.

Road Construction.—Jefferson County, Bd. of Rev., Birmingham, Ala.—Bids until March 16 to build 4 roads as follows: 14 mi. Roebuck-Chalkville-County line, 150,000 sq. yds. bituminous top on reconstructed base; 3 mi. Leeds-County line, 4500 cu. yds. chert; 3.3 mi. Short Creek-Powhatan, grade and surface, 5500 cu. yds. cinders; 2.5 mi. Oak Grove-Liz Ford, by Stinnett's place, grade; plans, etc., from C. J. Rogers, County Highway Engr.

Road Construction.—Louisiana Highway Comsn., Raymond Bldg., Baton Rouge, La.—Bids until March 13 for 5.49 mi. Colfax-Natchitoches highway; plans, etc., on file; J. M. Fourmy, State Highway Engr.

Road Construction.—Lee County Comms., Bishopville, S. C.—Bids until March 15 to improve, construct drainage structures, etc., on 4.254 mi. State Route No. 34, from Darlington County line, Survey Sta. 0-00, to Survey Sta. 225-62, at Lynche's River swamp; 10,468 cu. yds. sand clay surfacing; plans,

etc. from State Highway Engr., Columbia, S. C.

Road Construction.—Marion County Court, Lee N. Satterfield, Clk., Fairmont, W. Va.—Bids until March 28 to grade, construct drainage structures and pave 3 mi. Grafton road in Union Dist.; plans, etc. on file and from B. H. Palmer, Dist. Road Engr., Fairmont.

Road Construction.—Chester County, Board of Directors, Chester, S. C.—Bids opened March 7 to grade, construct drainage structures and top soil surface 8.6667 mi. State Route No. 9, between Survey Sta. 21 plus 00, near Catawba River, and Survey Sta. 492 plus 22, near Richburg; F. A. Proj. No. 68; plans, etc., from State Highway Engr., Columbia, S. C.

Road Construction.—Warren County Highway Comms., Geo. Williamson, Secy., Vicksburg, Miss.—Bids opened March 6 for 2 sections South Scenic Highway, between Tucker's Viaduct and bridge to be constructed over Big Black River; 8.1 mi. from Yokena North, and 6.4 mi. from Yokena South; 16,900 cu. yds. gravel surfacing for Sec. 1, and 13,350 cu. yds. gravel surfacing for Sec. 2; plans, etc., on file and from County Engr.

Road Construction.—Aiken County Comms., Aiken, S. C.—Bids until March 14 for 6.236 mi. State Route No. 39, from Survey Sta. 780-00, end of Proj. No. 182-A, toward Monetta to Survey Sta. 1108-87; 15,245 cu. yds. sand clay surfacing; F. A. Proj. 182-B; plans, etc. from State Highway Engr., Columbia, S. C.

Road Construction.—State Highway Comsn., Frankfort, Ky.—Bids until March 14 to grade, construct drainage structures, etc. on 7 sections of roads as follows: Nelson County, 6.333 mi. Louisville-Bardstown road, from High Grove, Sta. 1128 plus 00, to Cox Creek Postoffice, Sta. 1462 plus 39; F. A. Proj. No. 86, Sec. B; Davison County, 8.501 mi. Louisville-Bardstown road, from Jefferson County line, Sta. 675 plus 60, to High Grove, Sta. 1128 plus 00, in Bullitt, Spencer and Nelson Counties, F. A. Proj. No. 86, Sec. A; Lawrence County, 19.618 mi. Louisa-Paintsville road, from Powhatan St. Louisa to Johnson County line at Lowmansville, F. A. Proj. No. 78; McCreary County, 9.416 mi. Whitley City-Tenn. State Line road, from Whitley City, Sta. 0 plus 00 to Tenn. State Line Sta. 408 plus 80, State Proj. No. 22, Secs. B. and C.; Johnson County, 11.297 mi. Paintsville-Louisa road, from paved street in Paintsville, to Lawrence County line, F. A. Proj. No. 77; Grant County, 8.301 mi. Lexington-Covington road, from ½ mi. north of Crittenden, Kenton County, to south corporate limits of Dry Ridge, Grant County, F. A. Proj. No. 90; Anderson County, 3.9 mi. Lawrenceburg-Versailles road, from Lawrenceburg to Kentucky River, State Proj. No. 20, Sec. C; plans, etc., on file; Joe S. Boggs, State Highway Engr.

Roller (Steam).—See Street Paving Equipment.

Roller (Steam).—D. C. Elphinstone (Mchy. Dealers) 408 Continental Bldg., Baltimore, Md.—One 10 ton, 3 wheel steam roller.

Saw Mill Equipment.—See Chair Machinery.

Ruling Outfit.—See Printing (Job) Plant Equipment.

Saw (Band).—Guy Cooper & Bros., 1825 Grand Ave., Kansas City, Mo.—To purchase power band saw.

Saw (Special).—E. T. Rosamond & Co., Memphis, Tex.—To contract for mfr. of special saw in lots of ten thousands for a cotton burr extracting machine; saw to be 6-in. long and 7 points to the inch, curved to fit a cylinder 20-in. diam.

Screen and Grilles (Metal).—Treasury Dept., Supvg. Archt.'s Office, Washington, D. C.—Bids until March 23 to furnish and install metal grilles and screens for windows for U. S. V. H. at Tuskegee, Ala.

Screens (Fly).—Treasury Dept., Supvg. Archt.'s Office, Washington, D. C.—Bids until Mch. 20 for fly screens for the U. S. post office at Franklin, N. H.

Sewer Construction.—Commrs of Public Works, Paducah, Ky.—Bids until March 20 for construction of 14,833 ft. of sewers varying in diam. from 42-in. to 10-in., 307 feet to 3506 feet in length and average depth of from 7.8 feet to 13.3 feet; boring and test pits indicate clay, sand and gravel; materials for construction include concrete pipe, monolithic concrete, segment block, vitrified clay, cement pipe or brick.

Shades (Window).—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Mch. 8 to furnish 576 Holland green window shades, 6 ft. x 36-in.; 48 Holland green shades, 54-in. x 6 ft. long; 576 prs. roller shade brackets; outside coppered iron; delivery Marine Barracks, Quantico, Va.; Sch. 345.

Shafting, Etc.—Chas. J. Shelverton, Austell, Ga.—Prices on line shafting, etc. for woodworking plant.

Shoes.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Mch. 19 to furnish 50,000 prs. russett shoes; delivery Depot Quartermaster, 1100 S. Broad St., Philadelphia, Pa.; Sch. 349.

Shovel (Steam).—D. C. Elphinstone, (Mchy. Dealers) 408 Continental Bldg., Baltimore, Md.—One caterpillar steam shovel, $\frac{3}{4}$ -yd. with ASME boiler.

Skidder.—Messrs. Truesdel & Taylor, Box 266, Camden, S. C.—To purchase 10 x 12 second-hand skidder.

Springs (Coil and Flat).—Auto Top and Seat Cover Equipment Co., Box 262, Tampa, Fla.—To contract for mfr. of coil springs and small flat springs.

Stands (Metal Flower).—J. Richard Carr, 617 Union Ave., Petersburg, Va.—To correspond with mfrs. of wire or stamped metal flower stands for lawns or front yards.

Steel Building.—Florida Machine Works, Jacksonville, Fla.—Steel building suitable for machine shop, approx. 60x130x20-ft. high (curb to eave); state location, price and description.

Steel Framing, etc.—New Orleans Port Commrs., Suite 200, New Court Bldg., New Orleans, La.—Bids until March 22 to furnish, erect and paint steel framing required for wharf structure at Poland St. landing; plans with Supvr. of Purchases, 1 Canal St.

Stove Parts (Cooking and Heating).—L. B. Vanderslice, 523 W. Orange St., Lakeland, Fla.—To correspond with firms making a specialty of furnishing new parts for cooking and heating stoves of different makes.

Stoves and Ranges.—See Miscellaneous Supplies.

Straightening Machine.—Pennsylvania Equipment Co., (Mchy. Dealers) Norwood Station, Pa.—To purchase one Medart or Abramsen straightening machine to handle up to 3-in. round bars.

Street Pavin Equipment.—Paul J. B. Murphy, City Mgr., Radford, Va.—Prices on following equipment: asphalt heating kettles and pouring pots; one sack concrete mixer; asphalt tamps; wheelbarrows, 5 to 8 ton tamden steel roller, second hand; small paver new or second hand; cement; asphalt for bituminous macadam paving.

Stucco Board.—W. F. Ellis, Ashland, Ky.—Prices on stucco board.

Tank (Cypress).—J. W. Pierce, Orebank, Va.—One 5000 gal. capacity cypress tank.

Tanks Storage.—Alex. M. Robinson (Mfrs. Agents) Georgetown, Ky.—To purchase 5 or 6 steel storage tanks, approx. capacity 500,000 gals.; give full specifications, condition, number of tanks at any location; price each f. o. b. cars point of delivery.

Tank (Water) and Tower.—Dist. Engr. Office, Mississippi River Dredging Dist., Box 1017, Memphis, Tenn.—Bids until March 22 to construct, deliver and erect one water tank and tower at U. S. Dredge Depot.

Tanks.—Automatic Fire Extinguisher Preventer & Insurance Co., Wichita, Kan.—Prices on light steel tanks (square) to withstand 100 lbs. pressure, same to be welded to be water and gas proof, with detachable lids or tops, bolted on with metal gaskets between tank and top.

Thermostats.—Automatic Fire Extinguisher Preventer & Insurance Co., Wichita, Kan.—Prices on indestructible thermostats.

Tractors.—D. C. Elphinstone (Mchy. Dealers) 408 Continental Bldg., Baltimore, Md.—Three 10 ton tractors; also six 5 and 10 ton tractors.

Uniforms.—Uniform Committee of Board of Trustees, State Normal School, Athens, Ga.—Bids until March 15 to furnish uniforms to students of State Normal School for year ending March 15, 1924. Address Jere M. Pound, Prest.

Valve Boxes, etc.—Board of Awards, Richard Gwinn, Register, City Hall, Baltimore, Md.—Bids until Mch. 14 to furnish and deliver curb stop and roadway valve boxes to Water Dept.; specifications at office of Wm. A. Megraw, Water Engr., City Hall.

Ventilators (Window).—W. C. Loughbom, Jr., 308 Beatty Bldg., Houston, Tex.—To correspond with mfrs. of wind deflectors used in office windows, to keep direct current of air from blowing loose papers from desks.

Water Works Equipment.—City of St. Petersburg, Fla., H. T. Davis, Director of Finance—Bids until March 12 to furnish and install pumping unit of either gasoline engine or electrically driven pumping equipment; also cast iron pipe fittings, valves, varying in size from 4 to 12-in., for use in extending city water works system.

Water Works Improvements.—City of Wheeling, W. Va., C. H. Dowler, City Mgr.—Bids until March 28 for intake pier; intake line; substructures and superstructures for 20,000,000 gal. filtration and pumping station; heating plant; filter equipment; sluice gates; disturbing mains; valves cast iron pipe; 30-in. steel and cast iron force mains; five 1,000,000 gal. storage tanks and appurtenances; proposal blanks, etc. obtainable from office of the J. N. Chester Engineers, Union Bldg., Pittsburgh, Pa.

Wharf Construction.—Anderson Clayton & Co., Mason Bldg., Houston, Tex.—Bids opened March 3 to construct 1500 ft. wharf, 40 ft. wide; approx. cost \$300,000; Robert J. Cummins, Engr., 214 Gulf Bldg.

Wharf Repairs, etc.—U. S. Quarantine Station, Galveston, Tex.—Bids opened March 8 for repairs to wharf and storehouse foundations at quarantine station; G. M. Guiteras, Custodian ex-Officio.

Wire (Metal).—Automatic Fire Extinguisher Preventer & Insurance Co., Wichita, Kan.—Prices on metal wire for construction of heaters that will stand from 800 to 2000 degrees heat without fusing.

Woodworking Machinery.—Cyrus W. Scott, Houston, Tex.—To correspond with mfrs. of mchy. for furniture factory.

Woodworking Plant.—Taylor-Parker Co., Chas. A. McLean, Box 1183, Norfolk, Va.—Complete outfit for box making plant.

Financial News

New Financial Corporations.

Ala., Talladega—McConnell-Boynton Finance Co., capital \$60,000 incptd. with L. J. McConnell, Prest.; T. D. Boynton, Secy. (Lately noted.)

Ark., Louann—The Bank of Louann, capital \$15,000, incptd. with Harry B. Solmsion, Prest., Little Rock.

Fla., Stuart—The Seminole Bank, capital \$50,000, incptd. by E. J. Ricou, John E. Taylor and others.

Mo., University City—State Bank of University City, capital \$25,000, incptd. with L. T. Ward, Prest.; J. P. Rels and S. H. Wallace, Vice-Prests.

N. C., Asheville—Asheville Investment Co., capital \$100,000, incptd. with L. B. Jackson, Prest.; F. B. McCoy, Secy. (Lately noted.)

N. C., Charlotte—Independence Guaranty Co., capital \$25,000, incptd. by A. J. Hagood, W. A. Watson and E. E. Jones, all of Charlotte.

N. C., Raleigh—The Merchants National Bank merged with the Wachovia Bank and Trust Co.

Okla., Marietta—The Love County National Bank of Marietta, capital \$25,000, conversion of Guaranty State Bank of Marietta, E. A. Walker, correspondent, 101 West Main St.,

Okla., Wynnewood—The State National Bank, capital \$25,000, conversion of the First State Bank of Wynnewood.

Tenn., Lexington—The First National Bank of Lexington, capital \$25,000, incptd. with J. W. Stewart, Prest.; John A. McCall, Cashier.

Tenn., Memphis—Southern National Bank and Trust Co., incptd. with Arch. J. Williams, Manager.

Tex., Austin—Ship Channel Building and Loan Assn., capital \$2,500,000, incptd. with F. L. Churchill, Prest.; E. O. Durfee, Vice-Prest., 909 Rusk Ave.

New Securities.

Ala., Florala—School and Refunding—City sold \$35,000, 5 $\frac{1}{4}$ % bonds to J. L. Arlitt, Austin, Tex. Address The Mayor.

Ala., Mobile—School—City and County will sell \$100,000 bonds about April 1. Address County Commrs.

Ark., Fort Smith—Paving—City, Fagan Bourland, Chrmn., sold \$150,000, 5%, \$1000 denom. bonds to First National Bank of Fort Smith. (Lately noted.)

Fla., Bradentown—Street, Sewer, Water and Park—City sold \$86,000 bonds to Hanchett Bond Co., of Chicago, Ill. Address The Mayor.

Fla., Coconut Grove—Improvement—City, F. L. Knight, City Atty., will vote in March on \$200,000 bonds. Address The Mayor.

Fla., Lake City—Public Improvement—City will vote on \$250,000 bonds. Address The Mayor.

Fla., Orlando—School—Orange County Special Tax School Dist. will receive bids until March 12 for \$160,000 bonds. Address A. B. Johnson, Supt. of Public Instruction.

Fla., Punta Gorda—Road—Charlotte Coun-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

ty voted \$250,000 bonds. Address County Commrs.

Fla., St. Petersburg—Municipal—City, H. T. Davis, Director of Finance, will receive bids March 5 for \$1,037,000, 5½%, \$1000 denom. bonds. (Lately noted.)

Ky., Augusta—School—City voted \$24,000 bonds. Address The Mayor. (Lately noted.)

Ky., Bardwell—Road—Carlisle County voted \$300,000 bonds. Address County Commrs.

Ky., Winchester—School—City sold \$150,000, 5% bonds. Address The Mayor. (Lately noted.)

La., Avoyelles—Drainage—Avoyelles Parish, Drainage Dist. No. 9 sold \$66,000, 5% bonds to L. E. French & Co. of Alexandria. Address Parish Police Jury.

La., Baton Rouge—Sewer, Paving, Drainage—City will vote on \$2,000,000 bonds. Address The Mayor.

La., Bossier—School—Bossier Parish School Dist. No. 8 sold \$75,000, 5% bonds to Interstate Trust & Banking Co. of New Orleans. Address Parish Police Jury.

La., Catahoula—School—Catahoula Parish School Dist. No. 5, sold \$75,000, 6% bonds to M. W. Elkins & Co., of Little Rock, Ark. Address Parish Police Jury.

La., Clinton—Road—East Feliciana Parish Road Dist. No. 1, will receive bids until March 14 for \$150,000, 5% bonds. Address Parish Police Jury.

La., Mamou—Water—Evangeline Parish, J. C. Fruge, Village Clk., will open bids March 5 for \$40,000, 6% bonds.

La., Monroe—Courthouse and Jail—Ouachita County will vote in June on \$500,000 bonds. Address County Commrs.

La., Plaquemine—Public Utility—City sold \$150,000, 6% bonds to Interstate Trust & Banking Co. of New Orleans. (Lately noted.)

La., West Monroe—Waterworks and Sewerage—City will vote April 3 on \$140,000, 6% bonds. Address The Mayor.

Miss., Biloxi—Street, Road, Sewer, Parks, Playgrounds, Buildings—City Comsn., voted \$550,000 bonds. (Lately noted.)

Miss., Friars Point—Refunding—Coahoma County will open bids March 5 for \$35,000 bonds. Address County Bd. of Supvrs.

Miss., Jackson—Bridge, Street, School and Drainage—City, Walter A. Scott, Mayor, will vote April 14 on \$175,000 bonds.

Miss., Meridian—Sewer, Bridge—City voted \$25,000 bonds. Address The Mayor.

Miss., Oxford—School—City contemplates voting on \$75,000 bonds. Address W. S. Leathers, Member of State Board.

Miss., Pompey Lake—Drainage—Pompey Lake Drainage Dist. sold \$475,000, 6% bonds to National Bank of Commerce and Little Vardman & Biting, Inc. both of St. Louis. Address Dist. Commrs.

Mo., Kansas City—Water—City will sell \$1,500,000 of the \$11,000,000 bond issue voted. Address The Mayor.

Mo., Kirksville—Water—City voted \$260,000 bonds. Address The Mayor. (Lately noted.)

Mo., Lathrop—Water and Sewer—City will vote March 20 on \$82,000 bonds. Address The Mayor.

Mo., Piedmont—Water—City will probably vote on \$15,000 bonds. Address The Mayor.

Mo., Sedalia—Hospital and City Hall—City sold \$110,000, 5% bonds to the First National Co. and Stifel-Nicolaus Investment Co. both of St. Louis. Address The Mayor. (Lately noted.)

Mo., Sedalia—School—Sedalia School Dist. sold \$500,000, 5% bonds to the Union Trust

Co. of East St. Louis. Address Dist. Commrs.

Mo., Warsaw—School—Warsaw School Dist. voted \$44,000 bonds. Address Dist. School Trustees.

N. C., Charlotte—School—City will vote on \$1,000,000 bonds. Address The Mayor.

N. C., Faison—Light—City sold \$15,000, 6% bonds to Hanchett Bond Co., Chicago. Address The Mayor.

N. C., Fayetteville—Water and Sewer—City, H. J. McBuile, City Clk., received bids March 5 for \$350,000, 6% bonds.

N. C., Henderson—School and Refunding—Henderson Graded School Dist. will receive bids until March 12 for \$150,000 bonds. Address J. R. Teague, Secy.

N. C., Pittsboro—School—Pittsboro School Dist. voted \$50,000 bonds. (Lately noted.)

N. C., Rockingham—Paving—City contemplates issuing about \$100,000 bonds. Address The Mayor.

N. C., Shelby—Bridge—Cleveland County sold \$100,000 bonds to Otis & Co., at premium.

Okla., Bristow—School—Bristow School Dist. voted \$200,000 bonds. Address School Dist. Trustees.

Okla., Fairland—Water and Light—City sold \$40,000, 6% bonds to Hanchett Bond Co., Inc. of Chicago. Address The Mayor.

Okla., Sapulpa—Paving—Creek County, Tiger Township will vote on \$300,000 bonds. Address County Commrs.

Okla., Wynnewood—Light, Water—City sold \$85,000, 5½% bonds to Brown-Crummer Investment Co. of Wichita, Kas. Address The Mayor.

S. C., Aiken—Road—Aiken County Commrs., J. W. Ashurst, Jr. Clk., Bd. of Commrs. plan voting in July on \$450,000 bonds. (Lately noted.)

S. C., Charleston—Sewer—City will receive bids until April 2 for \$500,000, 4%, \$1000 denom. bonds. Address W. S. Smith, City Treas. (Lately noted.)

S. C., Cheraw—School—City voted \$75,000 bonds. Address R. T. Castor, Chrmn. of School Bd.

S. C., Chester—School—School Dist. No. 1, J. C. McClure, Secy., sold \$150,000, 4½%, \$1000 denom. bond to White Bank and Peoples National Bank, both of Chester. (Lately noted.)

S. C., Conway—Road, Bridge—Horry County contemplates issuing \$30,000 bonds. Address County Commrs.

S. C., Easley—Street, Sidewalk and Indebtedness—City sold \$80,000 bonds to Lowry Bank & Trust Co. Address The Mayor.

S. C., Greenville—School—Fork Shoals Dist. No. 2-B will vote March 6 on \$12,000 bonds. Address Dist. Trustees.

S. C., Greenville—School—Parker Dist. will vote on \$300,000 bonds. Address M. C. Barton, Supt. of County Schools.

S. C., Ruffin—School—Ruffin School Dist. No. 26, sold \$15,000, 6%, \$1000 denom. bonds to Hanchett Bond Co., Inc. of Chicago.

S. C., Walhalla—Indebtedness—Oconee County contemplates issuing \$100,000 bonds. Address County Commrs.

Tenn., Chattanooga—Hospital—City, A. W. Chambliss, Mayor, will vote on \$175,000 bonds.

Tenn., Murfreesboro—Street—City will receive bids until March 15 for \$21,000 bonds. Address The Mayor.

Tenn., Oakville—Hospital—City and County will probably vote on \$100,000 bonds. Address The Mayor.

Tenn., Paris—Indebtedness—Henry County sold \$85,000, 5% bonds to Caldwell & Co., Nashville. Address County Commrs.

Tenn., Shelbyville—School—City voted \$20,000 bonds. Address School Trustees. (Lately noted.)

Tex., Bango—School—City voted \$20,000 bonds. Address The Mayor.

Tex., Brownwood—School—City will vote on \$50,000 bonds. Address The Mayor.

Tex., Coleman—Road—Coleman County sold \$30,000, 5½% bonds at par. (Lately noted.)

Tex., Corpus Christi—Gas Pipe—City sold \$63,892, 6% bonds to J. L. Arlitt, of Austin, Tex. Address The Mayor.

Tex., Corpus Christi—Navigation—Navigation Dist. sold \$1,000,000 bonds to Sutherland, Barry & Co., of New Orleans. Address Dist. Commrs.

Tex., Dallas—School, Street, Water, Sewer and etc.—City, Mr. Aldredge, Mayor, will vote on \$8,325,000 bonds in April.

Tex., Electra—School—City will vote March 10 on \$196,000 bonds. Address B. M. Dinsmore, Supt. of Schools. (Lately noted.)

Tex., Electra—Incinerator—City sold \$7500, 6% bonds to the Superior Garbage & Incinerator Co., of Dallas, at par. Address The Mayor.

Tex., Galveston—Road—Galveston County Commrs. contemplate voting in April on \$1,000,000 bonds.

Tex., Galveston—Barge—City contemplates issuing \$250,000 bonds. Address The Mayor.

Tex., Granbury—Water and Light—City will vote March 20 on \$75,000 bonds. Address The Mayor.

Tex., Grapeland—School—Grapeland Independent School Dist. voted \$25,000 bonds. Address Chrmn. Bd. of Trustees. (Lately noted.)

Tex., Houston—Port Improvement—City contemplates selling \$4,000,000 bonds. Address The Mayor. (Lately noted.)

Tex., Knox City—Water—City voted \$45,000 bonds. Address The Mayor.

Tex., Milan—Improvement—City will vote in March on \$100,000 bonds. Address The Mayor.

Tex., Muleshoe—School—School Dist. No. 4, Bailey County voted \$10,000 bonds. Address Dist. Trustees.

Tex., Roscoe—Street and Water—City will vote March 24 on \$24,000 bonds. Address The Mayor.

Tex., Tyler—School—City will vote March 15 on \$250,000 bonds. Address The Mayor.

Va., Charlottesville—Road—Albemarle County sold \$300,000 bonds. Address County Commrs.

Va., Emporia—Improvement—Town, W. W. Robertson, Clk., will receive bids until March 15 for \$100,000, 5½%, \$1000 denom. bonds.

Va., Graham—Street Side Walk—City, will receive bids until March 10 for \$37,500, 5% bonds. Address The Mayor.

Va., Portsmouth—Market—City, J. P. Jervey, Mgr., will issue \$200,000 bonds.

W. Va., Cameron—Water and Sewer—Cameron voted \$50,000 bonds. Address The Mayor.

W. Va., Keyser—Water—City, L. R. Warne, City Clk., voted \$175,000, 5½% bonds. (Supersedes previous item.)

W. Va., Sistersville—School—Sistersville School Dist. opens bids March 5 for \$60,000, 5% bonds. Address Dist. Trustees.

W. Va., Williamson—Road—Mingo County, Stafford Dist., voted \$300,000 bonds. Address County Commrs. (Lately noted.)

Financial Notes.

The Southern Maryland Trust Co., of Seat Pleasant, Md., increased capital from \$100,000 to \$200,000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

A MARKED CHANGE IN CATTLE RAISING METHODS IN OKLAHOMA AND ELSEWHERE.

Cattle Now Wintered in Oklahoma, Then Shipped On for Finishing in Other States.

By C. M. SARCHET, Ponca City, Okla.

The entire cattle program, so far as raising and handling stock on a large scale goes, has been changed in the past few years by a fly. Cattle were formerly kept in Oklahoma during the entire grazing season, being fat for shipment to market along about September 1, but now and henceforth, it seems, the plan will be to winter and then ship them on about the last week in June for some one else to finish. This plan is proving very satisfactory, according to cowmen in this portion of the state, and more will follow it this year.

Notwithstanding the above, there are more stock cattle on the farms in Oklahoma, particularly in the north central portion, than for a number of years. Evidently the farmers have bought cattle to feed during the winter, using up the surplus roughness and grain. A survey made recently of Noble, Kay and adjoining counties by cowmen showed this condition to be true.

"And there is no kick on the price of cattle now," one of these cowmen states. He explains that the price for steers is anywhere from \$5.50 to \$7.65 per hundred. "There is nice money either in raising cattle or speculating at those figures. By speculating I mean to buy, winter and pass them on. Cattle can be produced at a profit when you can sell them at such prices."

Under the new plan, the cattle are shipped out just before July 1, being sold to farmers and cowmen in Iowa, Illinois, Indiana and other states, where they are placed on bluegrass and perhaps some grain, and fattened for market. In the meantime the Oklahoma pastures are maturing and getting good for the fall, when other cattle are bought by the Oklahomans to winter and graze until the next June. There is good money in thus shipping them out as stockers for the other fellow to finish.

It has not been until recent years that the fly pestered the livestock on the pastures in Oklahoma to any extent. Three years ago the pest became very alarming and many cattle were killed, being literally devoured alive by hordes of flies. These do not come until soon after July 1 and then the cattle do everything possible but feed in attempts to elude them. Naturally during the sixty day period when cattle would be putting on their hard fat on Oklahoma pastures, the fly interferes.

Shipping these cattle on north and east, late in June, gets them away from the flies, and cowmen believe this plan will eventually eliminate the fly. Where this pest came from, three years ago, seems to be unknown.

"There is a good market for these stockers in June and early July," explains an Oklahoma cowman "It has been surprising really how well they sell and what a demand there is for them in the north and east. Even the low grade cattle sell well and there is money in handling them."

There is still another angle to the cattle industry in Oklahoma that is also proving profitable, and that is grazing herds for the other fellow. This plan is being followed in the Otoe and Kaw Indian countries particularly, also in the Osage to some extent, although in the latter the herds belong to the Texas or other southern cattlemen who ship to the Osage range, or to the Flint Hill range in Kansas, for grazing. Leases on Indian lands in the western Osage are now being taken for the ensuing year at the rate of twenty-five to fifty cents an acre.

It has been the rule, especially in the past few years, that there is a drouth section somewhere in the extreme south-

west and always there are herds of cattle that must be removed to other pastures. The Otoe and Kaw country cowman keeps in close touch with conditions and when such a drouth place appears, he is ready to offer his own pastures. During the past year this was followed successfully, the Oklahomans getting an average of \$6 per head for grazing such herds.

In the Osage is really the only range country left in Oklahoma which was formerly known as the cattlemen's paradise. And even in the Osage the plan of keeping herds during the winter and then shipping them on is being followed to a considerable extent. It is understood there are more cattle being kept on pasture and roughness in the Osage this winter than ever before. Some of these were held over from the summer range, while other cowmen have recently bought and shipped in herds. These will be wintered and then put out as stockers and feeders.

"Stock and grade cattle are gradually being improved in quality," says Col. Zack Miller of the 101 Ranch and vice-president of the Oklahoma Cattlemen's Association. "Now there is not five per cent of the lower grade or 'yellowbacks' that existed a few years ago. Cowmen learned they could get more for a red or other dark-colored steer than they could for a 'yellowback' and the latter have been rapidly eliminated. It is a hard matter to buy a herd anywhere now that does not have several Shorthorns, Durhams, Herefords or other good grades among them. These tone up the herd considerably."

"The grade of a herd is all in the bulls, and it has become the custom of cowmen to have nothing but high grade or registered bulls, thus building up the grades. Even the Brahma cattle are becoming adopted more and more in Oklahoma, Texas and other portions of the southwest, because by interbreeding them with Holsteins in particular and other high grades, a strong beef animal, well acclimated, is secured. Brahma cattle are bound to become a very popular breed in this entire portion of the United States."

Col. Miller makes the point, too, that there is no cattle shortage in sight at present. He says Louisiana is full of aged steers and that there is a great accumulation in Florida, where they have not been sold for several years because of no quarantine laws there that are recognized by adjoining states. He looks for legislation in Florida on that subject in the near future.

On the ranches as well as on the farms the number of purebred, registered cattle is gradually increasing. In addition to several thousand stock cattle, the 101 Ranch has herds of Herefords, Galloways, Dutch Belt, Holstein, and one of approximately 200 cattle, a crossbreed between buffalo and Galloway. On the Chilocco Indian school reserve of 9000 acres in the northern portion of Kay county there are 1000 cattle at present, two-thirds of which are registered Herefords. The Chilocco management is doing much to promote the purebred animal in the southwest. Recent reports indicate that purebred cattle are now being furnished Mexico, from Oklahoma farms and ranches.

On January 1, 1922, there were 1,421,000 cattle, other than milk breeds, in Oklahoma, with an assessed valuation of \$17.50 per head. In the meantime, however, there has been a considerable increase in number, according to cattlemen, and also in price.

Fine weather thus far this winter has been a great aid to the cattle industry, as there have been but few days when livestock could not be in the open, grazing on the pastures and ranges. Reports indicate that the same is true in the Texas panhandle country, where there are now many fat cattle on grass. Sufficient rains have supplied plenty of water and the grass has been unusually good everywhere throughout the cattle districts.



Caterpillars are made in sizes suitable for trucks of every type and weight

"*Caterpillars are the best tires we ever used"

The highest tribute that can be paid to any tire is to have a truck owner who has used many different kinds say, "These are the best tires we ever used."

That is what the Benson Lumber Co. of San Diego, California, says about *Caterpillar tires in the letter printed below.

"The attached picture is of four of our fleet of seven trucks, all of which are equipped with Caterpillar Cushion tires.

"We operate our trucks over all kinds of road conditions where resiliency is very important and traction very necessary. In our particular service a truck tire is put through a severe test.

"During the time that we have operated trucks we have tried various makes of truck tires and we have found that Caterpillars render the most efficient service of any make we ever used.

"The tires on the two trucks in the center of the picture have gone better than 20,000 miles and as you can see, are still good for a few thousand more."

Caterpillars have received this tribute from not one but hundreds of truck owners throughout the country.

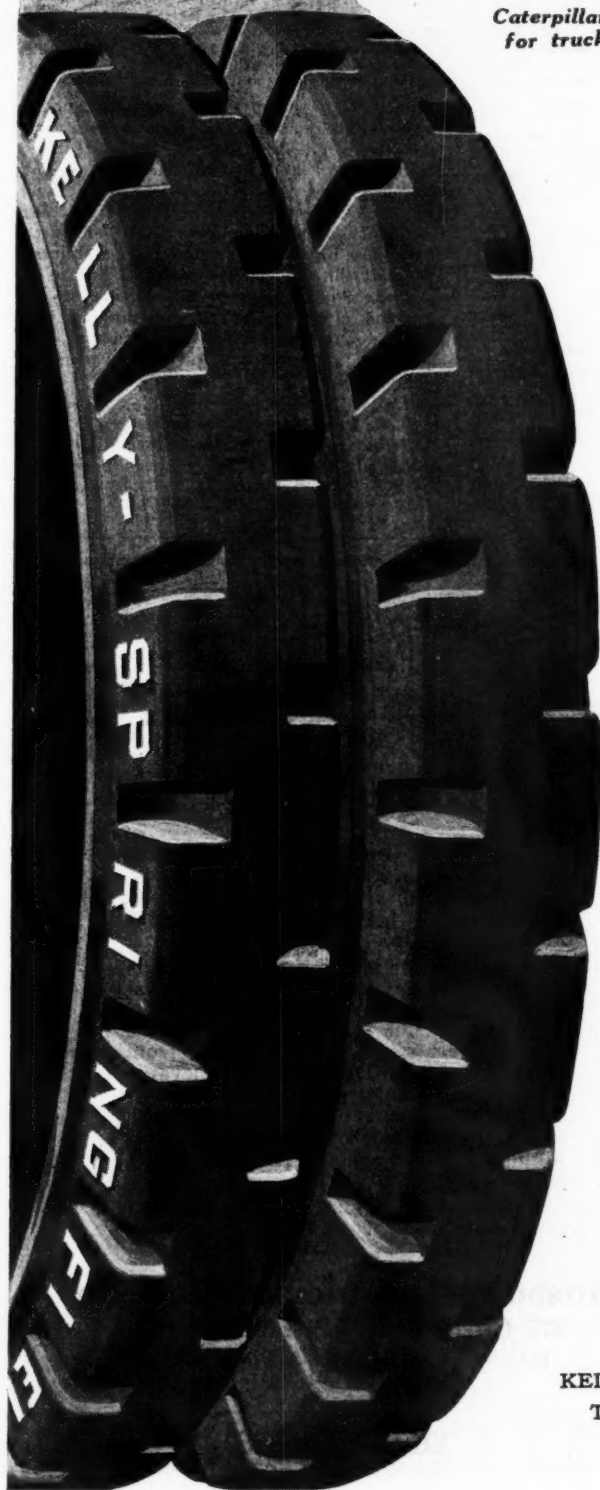
**U. S. Government tests show that cushion tires are 50% easier on roads than are solid tires. Caterpillars are an advanced type of cushion tire.*

There is no *Caterpillar Tire but the one that Kelly makes

KELLY-SPRINGFIELD
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Trade Literature.

Fire Box Boilers for Heating.

Every one interested in steam and hot water heating will find much valuable instructive information in Catalog H-9 of the Oil City Boiler Works, Oil City, Pa., which describes and illustrates their all steel fire box boilers that have over 45 years of practical experience put into their production. They comprise in one unit, it is remarked, all elements of a modern plant for steam or hot water heating, being a self-contained furnace and boiler all in one, ready to set up and operate. Any kind of fuel can be used in them safely. They are tested to 60 pounds hydrostatic pressure and they are built in accordance with the boiler laws of the various states. Besides, the ratings are conservative. Boilers of this make are also constructed for high pressure duty up to 100 pounds working pressure and to 150 pounds test on special orders.

Industrial Brooms and Brushes.

The Indianapolis Brush & Broom Manufacturing Company, 50 Brush St., Indianapolis, Ind., have issued a folder printed in two colors illustrating and describing their line of "Capital" industrial brooms and brushes which are made for use in factories, mills, foundries, machine shops, etc., comprising a great variety of service where strength, efficiency and durability are essential. In the manufacture of these brooms and brushes there are used fibre of different kinds, broom corn, bamboo, rattan, etc., various combinations being made to obtain results according to the nature of the work to be done.

Concerning Investments.

"Enduring Investments" is the caption of another very interesting booklet issued by Caldwell & Company, bankers, Nashville, Tennessee. It points out the fact that real estate is a factor in nearly all investments and proceeding from that goes on to demonstrate the value of the investment securities offered by the firm. Several tables accompany the reading matter and a combination picture symbolizes the strength back of the bonds. It is a booklet that will be interesting to investors.

An Important Wire Folder.

An attractive folder printed in English, French, Spanish and Portuguese has been issued by the Seneca Wire & Manufacturing Company, Fostoria, Ohio, describing their products and especially noting that the company give particular attention to the uniform gauge, temper and finish of their wire, all of these being important factors. This wire is made in liquor finish and either coppered, bright, annealed, tinned or galvanized, and in many different gauges.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers, or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Factory Building to Be Sold.

An opportunity for manufacturers is noted in a formal announcement elsewhere in this issue of a factory property which is being offered for sale, consisting of a brick factory building, seven acres of land in a thriving city of Maryland with all city facilities, and trunk line connection. The Securo Company, Inc., 9 E. Lexington St., Baltimore, is interested.

Operations Go On Under Receivers.

It is announced that, owing to the Cleveland Discount Company having gone into receivership, the Sharon Pressed Steel Company, Sharon, Pa., which was being financed by them, went into voluntary receivership Monday, February 26 in the United States District Court, Pittsburgh. The court has

authorized the operation of the plant under W. L. David and Donald Thompson, receivers, who have appointed A. E. Swan, former vice president and general manager of the Sharon Pressed Steel Company, to be their agent and attorney. It is further stated that the plant has approximately \$750,000 worth of business on its books—first class accounts; also that the Cleveland Company's failure to meet the Sharon payroll caused payday to be postponed a week, but notwithstanding this and the acute labor situation at Sharon, the employees reported for duty next morning 100 per cent.

Free Site for an Industry.

A Chamber of Commerce, organized last month at Mocksville, N. C., has begun its

(Continued on Page 110.)

MULLINS

Sheet Metal Stampings

Standard For 40 Years

In addition to the many standard products which we manufacture, we make "Special" Sheet Metal Stampings and parts to order, in accordance with specifications for practically all requirements.

Send us your blue prints, rough sketches and specifications for estimates. Our Engineering Department will submit suggestions and co-operate with you.

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(Stamping Department)
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For Progress—

You who are interested in the progress of your community and in the growth of your own business, investigate the service rendered by the Pittsburgh-Des Moines Steel Co.

Water must be stored against the emergencies of destruction, and for industrial and domestic purposes constructive in nature. The busier the shop, the whole City, the greater the danger from fire. Pittsburgh-Des Moines Elevated Steel Water Tanks will store this water for the community or the individual, safely, economically. Pittsburgh-Des Moines Service will handle the entire job.

Let us hear from you about your problem.

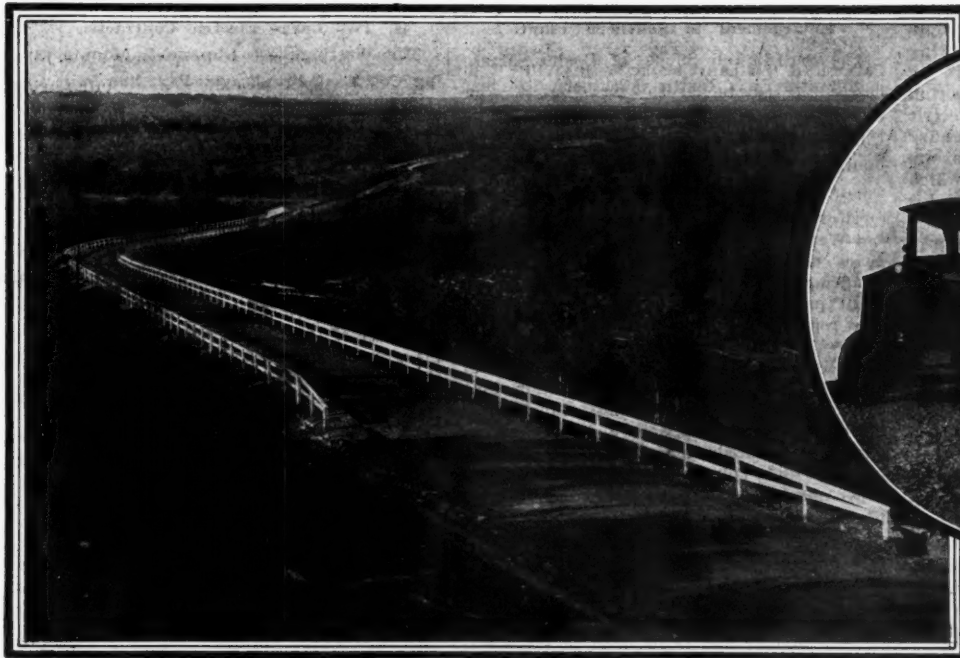
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Pittsburgh-Des Moines Steel Co.

875 Curry Bldg., Pittsburgh, Pa.

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PITTSBURGH DES MOINES



Above—Auto truck spreading
"Tarvia-X."
Left—Amassa Road, Crystal Falls,
Mich. Typical of the Tarvia
roads found in all sections of
the country.

The Country Wants Good Road *Mileage*—

"GOOD ROADS at *any cost*" is a mistaken policy. Good roads cease to be a benefit when the expense of building and maintaining them becomes burdensome. Costly construction slows up automatically the proper development of any good roads program.

What the country wants and needs is greater *mileage* of moderate-priced, low-maintenance, all-year highways. Hundreds of towns and counties have found that Tarvia roads squarely meet this demand; that they are the economical solution of the good roads problem—satisfactory alike to road officials and taxpayers.

For Tarvia roads are not only firm,

smooth, dustless and mudless all the year round—they are far less costly to build than any other type of modern highway, and far less costly to maintain. Because of these economies, the use of Tarvia insures the most miles of good roads that can possibly be built and maintained with the road funds available.

The granular surface of a properly constructed and properly maintained Tarvia road prevents skidding.

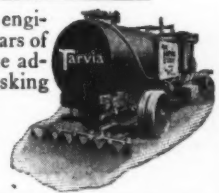
"Tarvia-X" is a dense coal-tar preparation which experience has proved to be the most durable bituminous binder for road construction. Other grades of Tarvia are made for preserving and patching all kinds of hard surface roads.

Tarvia

*For Road Construction
Repair and Maintenance*

Special Service Department

This company has a corps of trained engineers and chemists who have given years of study to modern road problems. The advice of these men may be had for the asking by anyone interested. If you will write our nearest office regarding your road problems, the matter will be given prompt attention.



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THE BARRETT COMPANY, Limited.

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Toronto

Winnipeg

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St. John, N. B.

Halifax, N. S.

activities by an aggressive campaign to secure the establishment of manufacturing plants there. As announced elsewhere in this issue a site for a new industry—cotton mill preferred—is offered free. Electric power is available and there are sundry other advantages. Further particulars are to be found in the announcement, which calls attention to other sites suitable for manufacturing establishments.

Important Engineering Contracts.

A report from Lumberton, N. C., says that Lockwood, Greene & Co., of Charlotte, N. C., and Boston, Mass., have been commissioned to make a complete study of the Lumberton and the Dresden cotton mills at Lumberton with the idea of producing yarn to be woven in a new mill containing 600 looms, which is to be called the Mansfield Mill. This service will include complete engineering, with recommendations for machinery and equipment. Other work designed and supervised by this firm includes the new mill of the Maine Spinning Co., Skowhegan, Me., which was completed in January. It is 84 by 220 feet and has three stories and a basement. All machinery is motor driven. Lockwood, Greene & Co. are also preparing for Dadant & Sons, Hamilton, Illinois, a report showing sketch plans and how to expand their manufacturing facilities for the production of honey comb foundations which are used by bee keepers.

Ice Making and Refrigerating Plants.

Recent installations of ice-making and refrigerating machinery by the York Manufacturing Co., of York, Pa., are reported at different points in the South as follows: Richmond, Va.; Latonia, Ky.; Lenoir, N. C.; Mobile, Ala.; Portsmouth, Va.; McIntosh, Fla.; Independence, Mo.; Columbus, Ga.; Elizabeth City, N. C.; Port Arthur, Tex.; Nashville, Tenn.; Amarillo, Tex.; St. Louis, Mo.; St. Petersburg, Fla.; Ocilla, Ga.; Statesboro, Ga.; Harriman, Tenn.; Columbia, Mo.; Houston, Tex.; Athens, Ga.; Louisville, Ky.; Bartlesville, Okla.; Spencer, W. Va.; Paris, Ky.; Leonard, Tex.; Central City, Ky.; Rocky Mount, N. C.; Atlanta, Ga.; Covington, Ky.; Elm Grove, W. Va.; Freeport, Tex.; Baltimore, Md.; Quinton, Okla.; Cleburne, Tex.; Houston, Tex.; Goose Creek, Tex.; Fort Smith, Ark.; Moberly, Mo.; Charleston, S. C.; Richmond, Va.; Temple, Tex.; Heavener, Okla.; Austin, Tex.; Greenville, Tex.; Muskogee, Okla.

Enlargement of Southern Plant.

The Saco-Lowell Shops, of Boston, Mass., manufacturers of textile machinery, are just completing a new plant at Charlotte, N. C., this establishment comprising the general Southern offices of the organization and a repair and supply department for Southern territory extending from Baltimore, South and West. This company has for over twenty years maintained at Charlotte a shop for repairing and reclothing cards and the new plant provides for doubling the capacity of this repair shop, with greatly improved facilities and equipment. Repair work will be extended to other textile machinery than cards, it being planned to ultimately take care of the full line manufactured. An entirely new departure is a supply or repair part distribution depot for picking, carding and spinning machinery and for other machines built by the company and plans are being made for future growth. Plans have already been drawn—the necessary land being included in the present site—for very extensive additions to this part of the plant. The building is to be an up to date home for the Southern personnel of the company and in its erection there will be a combination of mill construction with steel beams and cast iron columns for the shop and reinforced concrete for the office. The engineers are Lockwood, Greene & Co., of Charlotte and Boston and the general contractors are T. C. Thompson & Brother, of Charlotte and Birmingham. Rogers W. Davis is Southern agent of the Saco-Lowell Shops and with him at Charlotte are associated, U. S. Washburn, F. P. Brooks and D. W. Hunter, as selling agents. The branch at Greenville, S. C., is in charge of Walter W. Gayle with John W. Graves as selling agent. H. C. Cole is superintendent of erection for the South for installations of machinery and W. E. Harvell, foreman, has charge of repair work.

New Engineering Firm.

V. W. Breeze has organized the firm of V. W. Breeze & Co., at Charlotte, N. C., as structural engineers specializing in industrial work. They are acting as engineers for a \$150,000 addition to the J. G. Flynt Tobacco Company's plant, at Winston-Salem. This building is five stories high, 46 by 165 feet, and is of mill construction. The Southern Construction Co., Charlotte, have the general contract.

Two Large Electric Contracts.

The Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.; has built for the Chemins de Fer du Midi, France, 25 transformers rated 6667 KVA each for 50 cycle system. They are to be used on a nominal 150,000 volt system which is the voltage adopted for the new national transmission system, the highest thus far used in Europe. It is noted. The transformers are of the shell type and are arranged to be cooled by forcing oil through external coolers. Each transformer will have its own pump and its own oil cooler of the tubular type, the oil circulating around the tubes and the water through them. Another contract for the Westinghouse organization is with the Penn Central Power Co., operating in and around Altoona, Pa., and which has placed a large order for turbine generator, transformer, motor control and switching equipment to be installed in a new plant now being built at Saxton, Pa., this order being placed through Day & Zimmermann, Incorporated, Philadelphia, Pa. The initial installation will consist of two 12,500 KVA Westinghouse turbine generators, three phase, 80 per cent power factor 60 cycle, 13,200 volts. They will operate under a steam pressure of 250 pounds and 200 degrees superheat. Excitation will be from direct connected exciters rated at 75 KW 250 volts and there will be a 150 KW 1200 r.p.m. turbine driven exciter for a spare. There will be four Babcock & Wilcox Boilers with 11 retort stokers from the Taylor Stoker Co., besides much other equipment.

Enlarged Site Purchased.

The Blaw-Knox Company has purchased from the T. A. Gillespie Company, at Blawnox, Pa., 19 acres of river frontage in the Allegheny Valley adjoining the present works of the Blaw-Knox Company. Albert C. Lehman, president, would not say more than that the deal was made for expansion purposes. The purchase is believed to be significant as the company is now operating 100 per cent capacity and is handling a number of big contracts from the Texas Company, the American Sheet & Tin Plate Company, and the Milwaukee Electric Railway & Light Company, besides large contracts in connection with construction on the Welland Canal, Canada, and a large volume of construction for Japan. It is expected that the company will utilize its new acreage for making river shipments, but nothing definite could be learned.

\$47,000,000 Expended in Nine Years on Lincoln Highway—Total of 2350 Miles Constructed—243 Miles in 1922.

According to A. F. Bement, vice president of the Lincoln Highway Association, a total of \$47,000,000 has been expended on the Lincoln Highway in the nine years ended with the close of 1922. At an average of \$20,000 per mile, this sum has been sufficient to construct 2350 miles, or more than two thirds of the route.

Since the inauguration of the work of the Association, between seven and ten per cent of the total distance has been completed each year, while adequate maintenance has extended over a continually longer mileage of the completed work. A total of 243 miles was built in 1922 the eleven states transversed by the route building 235 miles with the aid of the Federal Government, the cost of all work for the year reaching \$4,678,041. Maintenance cost on the whole route amounted to \$1,368,126 in 1922, making the total amount expended last year \$6,046,167.

At the recent annual meeting of the Board of Directors

of the Lincoln Highway Association, it was estimated that by the end of this year, taking into consideration existing contracts, over \$50,000,000 will have been expended. It was further estimated that at least \$20,000,000 more will be expended in the future, making a total of \$70,000,000 required to bring the route to a satisfactory state of improvement.

Annual Meeting of North Carolina Pine Association.

Norfolk, Va.—The annual meeting of the North Carolina Pine Association will be held at the Monticello Hotel in this city on March 29. A number of prominent speakers have been secured including Governor Morrison of North Carolina Governor Trinkle of Virginia and W. B. Burrus of Kansas City, Mo. An address will be delivered by Bolling Arthur Johnson, editor of the Lumber World Review. The association is also endeavoring to secure James A. Emery, general counsel for the National Lumber Manufacturers Association of Washington.

In addition to set speeches, routine business will be conducted and officers and directors elected for the ensuing year.

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We will be glad to suggest Mill Engineers and Architects.

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Delivering 96" pipe
at Oklahoma City.

Concrete Pipe
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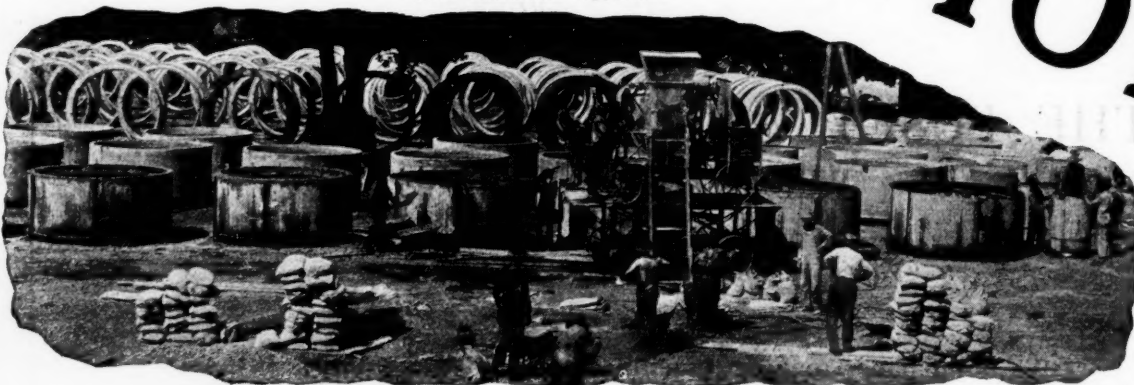
The unusual strength and durability of concrete pipe, permitting it to withstand exceptional loads, has been recognized by many of the leading Consulting and City Engineers and has been a valuable asset to them in planning permanent sewers. Properly made concrete pipe can withstand exceptional strains and can be depended upon to give utmost satisfaction.

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This is our aim in dealing with our customers. We have an organization trained to handle financial transactions, intelligently, capably and rapidly. It is our policy to treat the case of each individual as an individual case, giving it separate and careful consideration.

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GWYNN CROWTHER, President

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We Buy Bonds

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Municipalities and Contractors

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THE PROVIDENT SAVINGS BANK & TRUST CO.
CINCINNATI OHIO

We Buy Bonds

and invite inquiries from municipalities and contractors
We deal in city, county, district, school, road, lighting,
water works and other municipal issues.

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WE BUY MUNICIPAL BONDS

We are interested in the purchase of
Southern Municipals including road,
school, county, drainage and levee bonds.

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NOTICE TO CONTRACTORS

We want to buy bonds issued by cities, towns
counties, school, road or drainage districts that you
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MARINE BANK & TRUST COMPANY

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Capital and Surplus - \$2,300,000.00

General Banking - Domestic and Foreign

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BALTIMORE

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CAPITAL, \$1,000,000

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Mineral and
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Florida is growing and developing in a truly remarkable way.

This state offers splendid opportunities unsurpassed by any section in America for farmers, dairymen, cattle raisers, and growers of fruits and vegetables. The annual value of its farm crops now amounts to \$80,000,000.

In manufacturing also great progress has been made, the value of manufactured products running over \$200,000,000 a year. The mineral and lumber resources of Florida present good openings for the establishment of varied and profitable industrial enterprises.

The Seaboard Air Line runs through the heart of Florida, reaching into those sections that are showing the greatest activity in development and expansion.

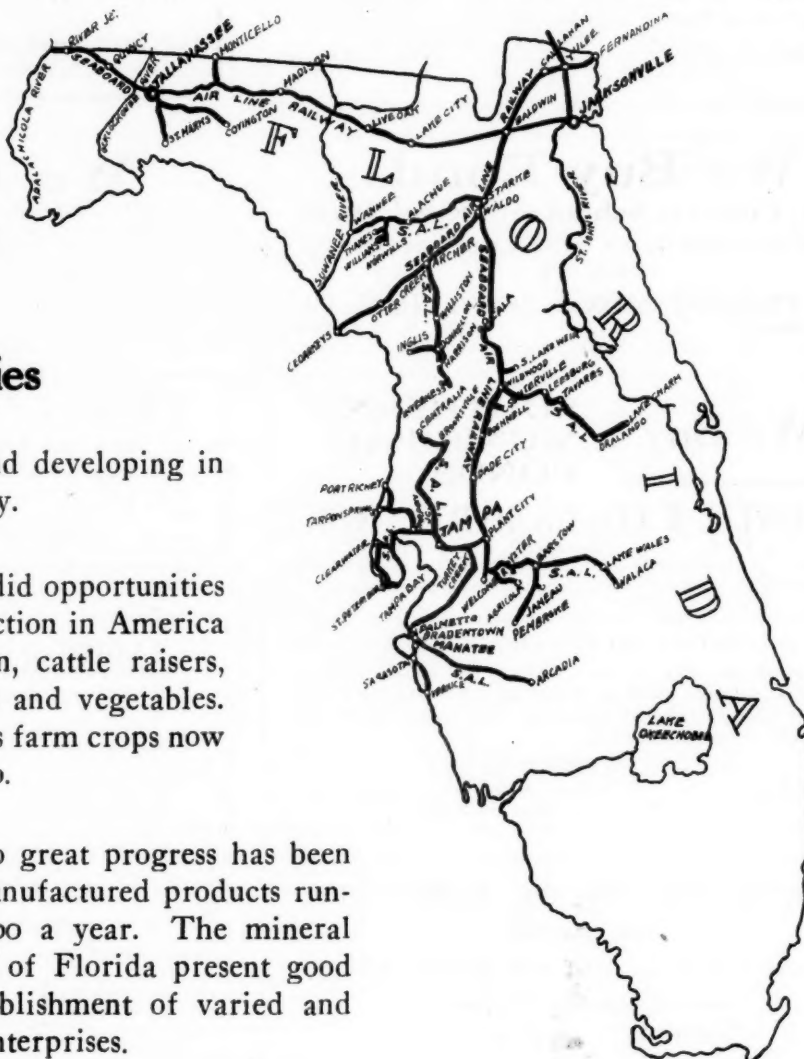
We will gladly furnish information about the agricultural and industrial opportunities in Florida.

JESSE M. JONES, General Development Agent

SEABOARD AIR LINE RAILWAY

Room 906 Savannah Bank & Trust Building

SAVANNAH, GEORGIA



Southern Labor Supply Attracts Mills To South

REASONS for the movement of textile mills from the north to the south are cited by the New York *Herald* in an editorial contained in a January issue. Quoting figures to show that for the four-year period embracing 1917 to 1922 the north gained 400,000 spindles while the south was gaining 1,336,000 spindles, the *Herald* gives the following major reasons for the trend southward:

"The forces that are pulling this industry away from its northern moorings and putting it in closer contact with the sources of raw material are natural causes. With the south's water power unsurpassed anywhere in the north the logical place for the cotton mills is in the cotton field. Hydro-electric development brings this power to regions remote from the source. The wonder is not that there has been a great increase in southern textile manufacture, but that the increase has not been greater.

"Another advantage possessed by the south is the abundance and quality of its labor supply. Its mill forces are almost exclusively recruited from the great reservoir of pure Americans that for generations has been largely stagnant in the southern mountains. Labor of this character means freedom from entanglements which the promotion of radicalism has made a handicap to northern manufacturers. Even if the south's advantages in this respect should not continue, the fundamental advantages of proximity to growing cotton and of milder climatic conditions will remain."

Alabama offers more than any other state for textile mills—raw cotton, almost at the mill door; abundant hydro-electric power with ample steam reserve; free factory sites in many communities; efficient native labor; cheaper transportation by water and rail routes. Full information furnished to all interested on application.

ALABAMA POWER CO.
BIRMINGHAM . . . ALABAMA

Need a Small Crane?

The Brownhoist 2-speed Crane is made for just your kind of work. This crane—

Works with—

Bucket, Hook,
Magnet, Shoveling
Attachment, etc.

Operates by—

Steam
Gas Engine
Electricity



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Branch Offices: New York, Chicago, Pittsburgh, San Francisco, New Orleans

Products: Locomotive Cranes, Buckets, Chain and Belt Conveyors, Storage Bins, Etc.

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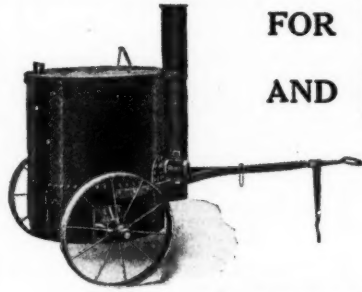
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PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

Bids close April 9, 1923.

TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C., March 1, 1923. Sealed proposals are invited to furnish Dextrine, Oils, Textiles, Dry Colors, Paper Boxes, Paper and Check Paper, during the fiscal year beginning July 1, 1923. The right is reserved to reject any or all bids or parts of bids. Samples of Dextrine, Oils, Textiles and Dry Colors must be received at the Bureau of Engraving and Printing not later than 2 P. M., Monday, April 9, 1923. Samples of paper Box Blanks, Paper and Check Paper, must be received not later than 2 P. M., Monday April 2, 1923. Blank forms with specifications for proposals, giving dates on which the bids for the several schedules will be opened, and further information will be furnished on application to Louis A. Hill, Director.

Bids close March 28, 1923.

PROPOSALS FOR AUTOMATIC REFRIGERATING plant, Parson brass, steel and manila rope, portable hand drills, valves, lubricating oils, burning oil, brass tubing, window glass, paints, varnishes, remover (paint, varnish, and enamel), raw linseed oil, enamel, white lead and zinc, lime, tackle blocks, scoop shovels, life rafts and preservers, motorcycle tires, rubber air hose, rubber packing, rubber bands, corn brooms, tar brushes, ready roofing, canvas polishing wheels, reed baskets, emery cloth, soap, bristol board, toilet paper, paper towels, hay, and lumber. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock a. m., March 28, 1923, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this Circular (1518) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 611 Gravier Street, New Orleans, La.; and Fort Mason, San Francisco, Calif.; also from the United States Engineer Offices in the principal cities throughout the United States.

A. L. FLINT,
General Purchasing Officer.

Bids close March 12, 1923.

U. S. ENGINEER OFFICE, Florence, Ala.—Sealed Proposals will be received here until 11 a. m., March 12, 1923, and then opened, for the construction and delivery of one steel barge 80 ft. by 22 ft. by 4 ft. Further information on application.

RATE: 35 cents per line per insertion.
PUBLICATION DAY: Thursday.
FORMS CLOSE 4 P. M., Monday.
DAY LETTER: When too late to send copy by mail to reach us by 4 P. M. Monday, forward by day letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD: Published every business day; gives information about the industrial, commercial and financial activities of the South and Southwest. The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements. The same rate applies—35 cents per line per insertion.

Bids close April 3, 1923.

U. S. ENGINEER OFFICE, Jacksonville, Fla.—sealed proposals will be received here until 12 M., April 3, 1923, and then opened for dredging and rock removal in Tampa Harbor, Fla. Further information on application.

Bids close April 2, 1923.

UNITED STATES ENGINEER OFFICE, Florence, Ala.—Sealed proposals will be received here until 11:00 A. M., April 2, 1923, and then opened, for furnishing head-gate track, screen track, seat castings, vent-outlet castings, together with bell-mouth castings, etc., for the power house section of Wilson Dam. Further information on application.

Bids close March 15, 1923.

\$100,000 5½% Public Improvement Bonds

SEALED PROPOSALS will be received for the above bonds by the undersigned Clerk, Town of Emporia, Virginia, up to noon, **THURSDAY, MARCH 15, 1923.**

Denomination: All \$1000 bonds. Maturity: Thirty-five years from March 1, 1923. Interest March 1st and September 1st. Principal and interest payable at The Hanover National Bank, New York City. Issue approved by John C. Thomson, Esquire, Attorney, New York City, whose opinion will accompany issue. Bonds to be prepared by buyer.

For further particulars, apply to the undersigned.

W. W. ROBERTSON, Clerk,
Emporia, Va.

Bids close March 12, 1923.

Street Paving

Proposals will be received by the City of Burlington, North Carolina until 2 o'clock P. M. Monday, March 12th, 1923, for grading and paving certain streets with either sheet asphalt or cement concrete.

The work will embrace approximately 17,500 square yards of pavement, 11,000 lineal feet of combined concrete curb and gutter, storm drains and accessories.

Plans will be on file and may be seen at the office of the Mayor, at Burlington, N. C. or at the office of The Ludlow Engineers, Winston-Salem, N. C. after March 1st, 1923. After that date copies of the Specifications may be obtained from the Engineer or Mayor.

Each bid must be accompanied by a certified check in the sum of approximately 5% of the amount of the bid.

Proposals will be opened publicly with the usual rights reserved.

EARL B. HORNER, Mayor
W. M. WILLIAMS, Chm. St. Com.
Burlington, N. C.

THE LUDLOW ENGINEERS,
Winston-Salem, N. C.

Bids close March 21, 1923.

Street Improvements

Enfield, N. C. Sealed proposals will be received by the Mayor and Commissioners of the Town of Enfield, N. C., at the Mayor's office in Enfield, N. C., until 3:00 P. M., March 21st, 1923, for the construction of Street Improvements.

The work will consist of approximately 25,000 square yards of Sheet Asphalt or other bituminous pavement on a concrete base, 17,500 lineal feet combined concrete or granite curb and gutter, 8500 square yards concrete sidewalks, 18,000 cubic yards excavation, 5500 lineal feet Vitritified pipe storm drains size 12-inch to 30-inch inclusive, 20 storm drain manholes, 50 catch basins, etc.

Proposals must be marked "Proposal for Street Improvements for the Town of Enfield, N. C." All bids must be submitted upon blank forms provided in copies of the proposal, contract and specifications.

Each bid must be accompanied by a certified check for five (5) per cent of the amount of the bid, as evidence of good faith.

Plans, copies of the proposal, contract, specifications, etc., may be obtained upon application to the Engineer.

The Town reserves the right to reject any or all bids and to award contracts which appear to be for the best interests of the Town.

ALLAN W. ANDLETON, Mayor.
WILLIAM C. OLSEN, Engineer,
Kinston, N. C.

Bids close April 10, 1923.

Draw Bridge

Bids will be opened at two p. m. on April 10, 1923, for furnishing and installing a standard steel turn draw on a concrete center pier for bridge across Indian River at Quay, St. Lucie County, Florida. Over all length of draw approximately 145 feet. Write to Carter & Damerow, Vero, Florida, for full information.

Bids close March 24, 1923.

Street Improvements

Charlottesville, Va.
Sealed proposals will be received by the City Manager of the City of Charlottesville, Va., until 12 o'clock noon on March 24, 1923, for Street improvement; consisting of grading, curbing, paving and resurfacing. Alternate proposals will be received for various types of surfaces. Estimated square yardage for this proposal 120,200. The City Manager reserves the right to increase or decrease this quantity.

Plans and specifications are on file in the office of the Engineer. Copies of the specifications and proposal blanks may be obtained from the City Manager.

Each proposal must be accompanied by a certified check for ten thousand dollars (\$10,000) payable to the Treasurer of the City of Charlottesville, Va.; to be returned in case the proposal is rejected or to be forfeited in case the bidder should refuse to enter into a contract in accordance with his proposal and the specifications.

The right is reserved to reject any or all bids.

BOYD A. BENNETT,
City Manager.

Bids close April 3, 1923.

Street Improvement

Rowland, N. C.
Sealed bids will be received by the Mayor and Board of Commissioners of Rowland, N. C., at 2.00 P. M., April 3, 1923, in the office of the Mayor for the following work:

5583—Sq. Yds. Street Pavement.

1515—Linear Feet Curbing.

9339—Sq. Yds. Sidewalk Pavement.

Necessary storm sewer, catch basins, manholes and grading.

A certified check for \$500.00 must accompany each bid.

The Town reserves the right to reject any or all bids.

Plans and specifications will be on file after 10 days from date with the Clerk and Treasurer in Rowland and in the Office of the Engineers. Copies may be obtained upon deposit of \$10.00 which will be refunded if plans and specifications are returned within 10 days after receiving bids.

Town of Rowland, N. C.
J. E. LYTCH, Mayor.
O. P. CHITTY, Clerk and Treasurer.
RYAN ENGINEERING CO., Engineers,
Arcade Building,
Columbia, S. C.

Bids close March 21, 1923.

Building Phoenix Road**WATER DEPARTMENT**

Baltimore, Md.
Sealed proposals, in duplicate, endorsed, "Bids for Building Phoenix Road, Contract No. 64, Water Department," addressed to the Board of Awards of Baltimore City, will be received at the office of the City Register, City Hall, Baltimore, Md., until 11 A. M., Wednesday, March 21st, 1923, at which time they will be publicly opened and read.

Plans and specifications may be obtained at the office of the Water Engineer, Room 204 City Hall, Baltimore, Md., on or after March 10th, 1923. A charge of twenty-five (\$25) dollars will be made for each set of plans and specifications; this amount will be refunded upon the return of these plans and specifications before March 28th, 1923, in good condition. Specifications used in making a bid will be considered as returned.

A certified check of the bidder on a clearing-house bank made payable to the Mayor and City Council of Baltimore for the sum of Two Thousand (\$2000) Dollars, will be required with each bid.

The quantities are approximately as follows:

10,040 cu. yds. of Earth Excavation and Embankment.

5200 sq. yds. of Concrete Roadway.

The successful bidder will be required to give bond equal in amount to the value of the contract and to comply with the City Charter respecting contracts.

The Board of Awards reserves the right to reject any or all bids.

Approved:
WM. A. MEGRAW,
Water Engineer.

Bids close March 15, 1923.

Street Flusher

Asheville, N. C.
The City of Asheville, N. C., will receive bids on one 1200 gallon capacity, motor driven street flusher. Submit specifications with bid. Bids to be in by 10 o'clock A. M., March 15, 1923. The City reserves the right to reject any or all bids.

J. H. SCHOEPP,
Purchasing Agent.

Bids close March 12, 1923.

42 Miles Road Paving

Little Rock, Ark.
Sealed bids will be received by the Board of Commissioners of the Little Rock-Hot Springs Highway District at the office of the Arkansas State Highway Commission, Little Rock, Arkansas, until 2:30 P. M., March 12, 1923, for the paving of the Little Rock-Hot Springs Highway from the city limits of Hot Springs to the Saline-Pulaski County line, a total length of 42 miles.

Bids will be received on concrete pavement 14 and 18 feet wide and of sections shown on the plans of the District which are on file at the State Highway Department and in the offices of the County Clerks of Garland, Saline and Pulaski Counties. The work will be let in seven contracts of approximately six miles each and a bidding bond of \$5000 will be required with each bid on each section of the work. A construction bond of \$25,000 will be required of the successful bidder for each section of the road. Bidders are invited to submit proposals for one or more sections of the road and should more than one section of the road be awarded to a single contractor the total required bond will not be in an amount to exceed \$100,000.

Detail information for bidders and specifications may be obtained at the office of the engineer. Complete plans and profiles drawn to a scale of 50 feet equals 1 inch, of each section can be obtained at the office of the engineer upon the payment of \$5.00, \$3.00 of which will be returned upon the return of the papers. The right is reserved to reject any and all bids. Local gravel which complies with the specifications may be used.

By order of the Board of Commissioners.
W. S. SORRELLS, Chairman.
GEORGE F. BUZBEE,
E. O. BAGLEY, Secretary.

ALFRED M. LUND, Engineer,
527 Southern Trust Bldg.

Bids close March 21, 1923.

Water Works Improvements

Roxboro, N. C.
Sealed Proposals will be received by the Mayor and Board of Commissioners of the Town of Roxboro, North Carolina, until 2 o'clock P. M. Wednesday, March 21st, 1923 for developing a new source of water supply. The principal items entering into the work are as follows:

Laying 20,000 feet of 12-inch cast iron B&S water pipe.

Building concrete and brick filter plant; concrete and brick pumping station; concrete reservoir; and

earth dam with masonry spillway.

Furnishing and erecting filter equipment. Furnishing and installing one 500 GPM centrifugal pump with electric motor and one 500 GPM centrifugal pump with gas engine drive.

Clearing impounding reservoir site—60 acres.

Plans will be on file and may be seen at the office of The Ludlow Engineers at Winston-Salem, N. C. or at the office of the Mayor at Roxboro, N. C. after March 1st. After that date copies of the Specifications, Bid Blank, and Contract Form may be obtained from the Engineers.

For the convenience of prospective bidders the Engineers will furnish full set of blue print copies of the plans upon application accompanied by a check for \$7.50 to cover the cost, or separate prints at \$1.00 each.

Each bid must be accompanied by a certified check payable to the Treasurer of the Town of Roxboro in the sum of \$4000 with complete bids, or approximately 5% of the amount of partial bids.

Proposals will be opened publicly with the usual rights reserved.

DR. W. A. BRADSHAW
The Ludlow Engineers, G. W. KANE
Winston-Salem, N. C. R. L. HARRIS
J. L. LUDLOW, Water Works Committee
Consulting Engineer.

Bids close March 20, 1923.

Water and Electric Light Improvements

Rayne, Louisiana.

Sealed proposals will be received by the Mayor and Council of the City of Rayne, Louisiana at the office of the City Clerk for constructing improvements to the Water and Electric Light plant improvements in and for the City of Rayne, Louisiana until 10:00 A. M. Tuesday March 20th, 1923, at which time they will be opened and read publicly.

The work consists of furnishing all labor, material and equipment of every kind necessary in accordance with plans and specifications of the Engineers.

The equipment and approximate quantities of materials are as follows:

1 - Power House of brick

2 - 200 HP. or 1—300 HP. oil engine generator unit

1 - 3 panel or 1—two panel switchboard,

1 - Deep Well

1 - 750 GPM deep well centrifugal pump and motor

1 - 750 GPM. Booster pump and motor

1 - Air lift system for 750 GPM.

1 - 750 GPM. fire pump and motor as alternate

16464-foot 6" Class B Cast iron pipe

732-foot 8" Class B Cast iron pipe

Specials.

43-Standard fire hydrants

24-8" and 6" Gate valves and boxes.

Each bid must be accompanied by a certified check on a bank satisfactory to the City Council, or bidders' bond for 5% of the amount of the bid.

A bond in the sum of 50% of the amount of the contract will be required for the faithful performance of the work.

Copies of plans and specifications may be seen at the office of the City Clerk, or obtained from the office of the Engineers on deposit of \$5.00 which will be refunded to bona fide bidders on return of plans and specifications.

The City reserves the right to reject any and all bids.

CITY OF RAYNE, LOUISIANA
A. C. CHAPPUIS, Mayor
JOE DUCLOS, Clerk
The J. B. McCRARY COMPANY
Engineers.

Bids close April 2, 1923.

Jail and Jailer's Residence

Grundy, Va.

Until noon on the 2nd day of April, 1923, the BOARD OF SUPERVISORS of Buchanan County, Virginia, will receive bids for the erection of a new jail and jailer's residence complete, according to the plans and specifications now on file in the Office of the Clerk of Buchanan County, Virginia. Separate bids must be made on the steel cells, so that the county may contract for the building complete without the cells if it desires to do so.

A limited number of copies of the plans and specifications have been provided and as long as they last, any prospective bidder can procure a copy at the actual cost of making, \$10.00, by writing F. H. Combs, Commonwealth's Attorney, Grundy, Virginia.

All stone called for in the specifications can be obtained from quarries within a few hundred yards of the building at a comparative nominal cost.

The Board of Supervisors reserves the right to reject any and all bids, and require a satisfactory bond from the contractor for the faithful execution of the contract. A time limit of approximately one year will be given for the completion of the building, to be agreed upon when contract is let.

All bids should be sealed and addressed to R. A. Looney, Chairman Board of Supervisors, Stacy, Virginia.

Bids close March 10, 1923.

Public Library

Sealed proposals received at Noon, March 10th, 1923, for erection of public library building, Rocky Mount N. C., for Rocky Mount Public Library Association. Drawings and specifications seen at office of Wilson and Berryman, Architects, 804 Palmetto Bldg., Columbia, S. C., and at 105 Davis Bldg., Wilson, N. C. F. E. Winslow, Chairman of Building Committee, Rocky Mount, N. C.

Bids close March 19, 1923.

Two School Buildings

Vicksburg, Miss.

Sealed bids will be received at the office of the City Clerk of the City of Vicksburg, Mississippi, up to 4 o'clock, P. M. March 19th, 1923 for the construction and erection of two public school buildings in the City of Vicksburg. Plans and specifications can be secured from the City Clerk upon a deposit of \$25 for each set of plans and specifications, the said deposit of \$25 to be refunded when the same are returned to the City Clerk.

Certified check for 2% of the amount of bid must accompany same.

The Board reserves the right to reject any and all bids.

J. J. HAYES,
Mayor.

Air Lift System

Lake Village, Ark.

Bids will be received at the office of William Kirten, Secretary, Lake Village, Ark., for the installation of a system of air lift to pump water from its deep well to tank which is 140 feet above surface of ground, water comes to within 20 feet of top of deep well and we have plenty of water, we have the machinery to drive the pumps or air compressors. Data furnished on request.

WILLIAM KIRTEN, Secretary.

Bids close March 19, 1923.

Water Main Extension

North Wilkesboro, N. C.

Town of North Wilkesboro, N. C. will receive bids up to and including March 19, 1923, 8 o'clock P. M. for contract for the extension of water main to cost approximately twelve thousand dollars (\$12,000).

Plans and specification can be had from City Clerk,

S. L. PARDUE.

Bids close March 15, 1923.

Gas Franchise and White Way

The City Council will let a twenty-five year Gas Franchise to the parties who make the best offer by March 15, 1923. Franchise will be let on that date.

Camden has present population of 7500; abundant supply of natural gas within fourteen miles of City; intense drilling campaign now under way in entire surrounding territory makes new Gas Field within two or three miles of city highly probable by early summer.

All applications must be submitted in complete franchise form at once. Bids on Modern Whiteway consisting of 85 posts will be considered at the same time.

CHAMBER OF COMMERCE
Camden, Arkansas.

Bids close March 20, 1923.

Water Tube Boilers

Holly Springs, Miss.

The City of Holly Springs, Miss., will receive sealed bids on March 20th, 1923 for two 200 horse power water tube boilers, 150 lbs. working pressure erected complete in the present boiler rooms in the City of Holly Springs.

Each bid to be accompanied by certified check for 5% of the amount of the bid to insure good faith and execution of bond for faithful discharge of the contract for delivering and erecting the boilers.

LESTER G. FANT, City Attorney.

Bids close March 19, 1923.

Power Plant Machinery and Electric Line Material

Jacksonville, Fla.

Sealed proposals will be received by the City Commission of the City of Jacksonville, Florida, until 3:00 o'clock P. M., Monday, March 19th, 1923, for the following equipment, in accordance with plans and specifications on file in the office of the City Commission and in the office of the Scofield Engineering Company of Philadelphia, Pa., Consulting Engineers.

1. 1-12,000 K. W. Turbo Generator
2. Surface Condensing Equipment

3. Improvements for surface condensing equipment
4. Admiralty Condenser Tubes
5. Switchboard additions and improvements, for Generating and Substations
6. Constant Current Transformers
7. Power Transformers
8. Reactors and Transformer rewinding material
9. Improvements for boilers and superheaters
10. Oil burners and furnace material
11. Force draft fans
12. Centrifugal boiler feed pump
13. Centrifugal sump pumps
14. Synchronous motors
15. 2-storage batteries
16. Machine shop equipment
17. Lead covered cable and joining material
18. Copper wire

Bids shall state the time in which the bidder guarantees to make shipment and complete the work as specified to the satisfaction and acceptance of the Consulting Engineers. Bids shall be subject to acceptance within two weeks. Form of contract is on file in the offices of the City Commission and Scofield Engineering Company, Consulting Engineers, Philadelphia, Pa., and further information may be obtained from said engineers or by applying to Frank H. Owen, Commissioner Public Utilities, City Hall, Jacksonville, Florida. Each bid must be accompanied by a certified check on a Jacksonville bank or on some National bank for five per cent (5%) of the amount bid as a guarantee that the bidder will, if awarded the contract, promptly enter into agreement for the work and furnish a surety bond acceptance to the Commission to an amount equal to twenty-five (25%) per cent of the contract price. Each bid should be addressed to the City Commission, be marked as a bid for Plant Machinery and Electric Line Material and be delivered through mail or otherwise at the office of the Secretary, Room 13, City Hall. The Commission reserves the right to reject any or all bids, to waive informalities or to accept any bid in whole or in part. March 1, 1923.

Attest:
W. A. EVANS, Chairman
E. P. OWEN, JR., Secretary

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS WATER POWERS, MISCELLANEOUS PROPERTIES

Wealth in virgin coal fields in Northern Alabama, near Tennessee River. Ready to mine with electric equipment; entries driven. Superior domestic steam and gas coal; unsurpassed in the South as an export coal. Iron ore, fire-clay, cement rock and limestone in vast quantities. Five million feet of Poplar Oak and Hickory timber on property. Industrial railroad connecting with Southern Ry. system. Soil overlying 16,000 acres, ideal for cattle, sheep and Angora goats and for fruit raising. For full particulars, price and terms, write F. D. Pierce, 1505 E. Genessee St., Syracuse, N. Y.

New Mexico ranch, 153,000 acres, \$3.50 per acre. Splendid grazing, timber, irrigation and mining proposition. Reasonable terms. Also other ranches. C. E. McGinnis, Roy, New Mexico.

TRIPOLI MINE For Sale. A very large deposit of high grade tripoli, easily mined, one mile from R. R. near Rome, Ga. If you need the ore, we can ship two carloads a day. Apply to owner: Francis Farnsworth, Cleveland, Tennessee.

FOR SALE OR LEASE—The mineral and mining rights in 200 acres containing by estimate two million tons of brown phosphate rock running 60% to 73%, one mile from L. & R. R. and 40 miles from Muscle Shoals. Government expert has examined and pronounced this ore superior for briquetting and new furnace process. A fine location for Ground Rock Plant. A most attractive price for investment or lease. Investigation invited. Dr. C. A. Abernathy, Pulaski, Tenn.

RATES AND CONDITIONS

Rate 30 cents per line per insertion. Minimum space accepted, four lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, oil or mining stock advertisement accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 28c. per line; 300 lines, 26c. per line; 500 lines or more, 25c. per line.

COAL LANDS AND MINES

FOR SALE—Going coal mines—coal, oil and gas lands—timber tracts. Reports made on same anywhere. E. H. Morris, Box 518, Charleston, W. Va.

FOR SALE: Well equipped Elkhorn mine, Pike County, Ky. Free of contracts or selling agency. Illness of operator accounts for his desire to retire. Address Elkhorn—1207 First Natl. Bank Bldg., Cincinnati, Ohio.

COAL—COAL—COAL

Six thousand acres of proven coal land in the center of one of the best coal fields in the country. Crossed by railroad. Near St. Louis. Drill tests and analysis of coal on application. Can give very low price for a short time. M. VON BOSTON, 114 East Del Norte St., Colorado Springs, Colo.

TIMBER AND TIMBER LANDS

FOR SALE—Forty thousand acres virgin Long Leaf Pine, estimated to cut one hundred million feet. Also fifty thousand acres cruised at ninety million feet, Long Leaf Pine, and seventy-five million feet of hardwoods and Cypress. F. W. Blair, 808 West 6th St., Chattanooga, Tenn.

FARM AND TIMBER LAND

FLORIDA—Timber, Colonization and Fruitland tracts any size; best in Florida. MAURER & COMPANY, Orlando, Fla.

FARM, FRUIT, AND TRUCK LANDS

FLORIDA

FLORIDA—Did you know that Florida is developing faster than any other State in the Union? It is, indeed, a land of great resources and opportunities. Come and be one of us. No coal bills, no wintry ice or snow—just sunshine, and health, and opportunity. Send for booklet "Largest Orange Tree in the World;" we have a Home, Grove or Farm for you. Tampa West Coast Realty Co., (Inc.) opposite Post office, "Since before the War," Tampa Fla.

NORTH CAROLINA

FOR SALE—Fifty acres on Rail road at Lincolnton, plenty of water, fine elevation, good Mill site.

R. E. Costner, Mt. Holly, N. C.

SOUTH CAROLINA

Truck farms that pay dividends annually can be bought at reasonable prices here. Vegetables are shipped eight months in the year. Three and four crops are grown on the same land annually. Excellent climate and health. Plenty of labor; strikes unknown. Well organized association that sells all farm products. For particulars write. Lake Realty Company, Beaufort, S. C.

BUSINESS OPPORTUNITIES

WANTED:—\$3000 to \$5000, by a going concern in western Va. that wants to expand, this includes third interest in the business with or without services, this business has paid over 20% on capital invested in 1922, do not waste our time unless you mean business. Address No. 6128, Care of Manufacturers Record, Baltimore, Md.

FOR SALE.

The F. O. Morgan Department Store
Leonardtown, Md.
Capital \$10,000 to \$15,000.
Annual Sales \$30,000 to \$40,000.
Immediate possession: clean and saleable stock in bulk; centrally located at County Seat of St. Mary's County. Best business stand in town. No debts: Insurance \$8000.00 store fixtures, including computing scales, show-cases, adding machine and acetylene gas plant included in sale.
Liberal discount to cash purchaser.
Ill health of proprietor reason for sale.
Apply to Enoch B. Abell, Leonardtown, Md.

WANTED—CAPITALIST interested in Coopersage Company and Cotton Mills or Fair Bluff, N. C.
Address J. E. Dick.

"WANTED: Two or three saw mills, capacity ten thousand feet per day, to operate under contract in a tract of exceptionally fine timber, located in southern Virginia." Address No. 6130 care Manufacturers Record, Baltimore, Md.

AN UNUSUAL INVESTMENT OPPORTUNITY.

To settle an estate that has been in successful operation for 69 years we offer two great cotton mills, two sugar mills, electric light plant supplying a growing city, alcohol plant, 600,000 acres of land, 25,000 head horses and cattle. With 20% development it is now paying \$800,000 annual dividends: with 50% development it would easily pay \$2,500,000 annually. No more substantial or profitable business ever established on the Western Hemisphere, and certainly none more fascinating: admirably located in foreign country 1000 miles from American border. Price \$5,000,000. Only those who are able to buy or promote a corporation to take it over will be considered. Lock Box 1273 Memphis, Tenn.

Wanted: A forwarding agent for a large concern that is figuring on an Export Department. Address No. 6138 care Manufacturers Record, Baltimore, Md.

I SPECIALIZE in industrial, warehouse and business sites at and adjacent to Washington, D. C.

M. B. HARLOW,
Harlow Building, Colorado Building,
Alexandria, Va. Washington, D. C.

WANTED—A buyer for a half interest (\$7500) in an undeveloped "Gold & Copper" mining property, 100 acres, in N. C., showing good surface values—Railway Crossing. Have order for 1000 tons of concentrates. J. H. Thain, General Delivery, Charlotte, N. C.

COLLECTIONS

"Send your past due accounts to us for collection. Commission basis. Correspondents everywhere. Herbert Co., Rand McNally Building, Chicago, Ill.

COLLECTIONS
MERRIAM,
507 FIFTH AVENUE,
NEW YORK CITY

FINANCIAL

SOUTHERN
MILL STOCKS
BANK STOCKS
BONDS.
25 years' experience in this field.
F. C. ABBOTT & CO.,
Charlotte, N. C.

"INCORPORATE any enterprise under common law; any capital, transact business any state; no corporation taxes; no personal liability; keep control; very reasonable. Booklet free. Reinshagen, 2 Rand McNally Building, Chicago, Ill."

FINANCIAL

Valuable text books on the "Money Question". The most vital question affecting the welfare of the people.—"Daniel on Real Money". New edition being published. "High Cost of Living, Cause-Remedy," 75c. "The Betrayal of the People in the Federal Reserve Act," 25c. "The Real Issue—Democracy vs. Plutocracy," 25c. No Plutocratic Peace But a Democratic Victory," 20c. The Monetary Educational Bureau, Kellogg Building, Washington, D. C.

INDUSTRIES WANTED

PONCA CITY, OKLA., offers financial assistance to worthy industries that can stand investigation. Has abundance of splendid water, sites and longtime fuel oil contracts; also natural gas. On main line Santa Fe railroad between Kansas City and Gulf. Population 12,000. Address Chamber of Commerce, Ponca City, Okla.

INDUSTRIES WANTED.

INVESTIGATE Boonville, Missouri, before deciding upon location for any factory or other industry you may be contemplating. Ideal conditions, and co-operation afforded. Address H. C. Neff, Secy., Chamber of Commerce, Boonville, Mo.

WASHINGTON, GEORGIA—In the heart of the cotton fields. Surrounded by pulp woods and hardwoods. Native white labor. No unions. No strikes. Cheap power available. The ideal location for cotton mills, pulp mills, furniture factories and other manufacturing enterprises. Write. Come and look us over. **KIWANIS CLUB.**

INDUSTRIAL PLANTS

"FOR SALE, or make part exchange for income property. "D" Handle Factory in Houston, Texas. Factory building 70 x 100 feet besides boiler and engine room, also a line of Mill mch. Full particulars, write Indiana Handle Co., Houston, Tex.

FOR SALE OR LEASE. Nearly new 40,000 capacity brick plant near Shreveport, La., have never supplied demand for brick. Good opportunity for parties who know the business. Address P. O. Box 404 Winnfield, La.

FOR SALE—ON EASY TERMS

Modern two story brick building 55 by 310 feet regular mill construction, fully sprinkled, large platform and sidetrack facilities for eight or ten cars. Large elevator. Adjoining this building is a single story brick building 50 by 90 feet, with boiler room in one section, balance concrete floor. This is an excellent plant and especially suitable for hosiery or knitting mill, located in best city in North Carolina.

J. E. LATHAM CO. OWNERS
Greensboro, N. C.

FACTORY for sale or lease. All or part of 100,000 sq. ft. floor space. Sprinkler System. Steam Heat. Railroad Siding. Central location. Wire King Thompson, 52 West Gay St., Columbus, Ohio.

MR. MANUFACTURER:
NORTH CAROLINA
THE BEST STATE IN THE UNION
INVITES YOU

If you wish to remove your plant or open a Branch in the Southland where climate and labor conditions are most favorable:

We have a 100x100 ft. Brick and Concrete building, 2 stories, located on Main street of a fine market town, facing N. & W. Depot permanent Railway siding one side, cross street on the other.

For sale easy terms, or long lease.

Write us today
THE AUTOSERVE COMPANY
MADISON, N. C.

FOR SALE or lease a small modern equipped crushing and pulverizing plant and quarry consisting of about 50 acres, underlaid with a high quality Clinton strata blue limestone 30x500 ft. open face dry quarry 94.20 carbonate extra quality road stone also makes extra strong burned lime. Big local demand. Plant in operation. Fine location for a larger plant as it is located in a territory of splendid markets and has a great future industrially. Plant near Lynchburg. Want to retire on account of age and health. Call on or address Frank Sharp, Lynchburg, Ohio.

FACTORY SITES

Factory sites free, Best shipping facilities in middle west. Three R.R.N.Y. Central, Wabash, Pennsylvania. On Toledo to Chicago pike. We will assist in getting you started. Butler, Indiana, Business Association Men.

FACTORY SITE

Suitable for Practically Any Line.
Will sell as an inducement to increase Laurel's factories. Adjacent to our plant. Will sell sawmill refuse as fuel to cost in our opinion not more than \$2.00 ton coal. Wausau Southern Lumber Co. Laurel, Miss.

FOR SALE: Desirable factory site located at Paragould, Arkansas; improvements consist of one story brick factory 255x40 with additions for boiler and engine room and warehouse. Two open frame sheds 100x100. Good power plant and lighting equipment. Railroad sidings Cotton Belt and Iron Mt. Railroads. All in first class repair. Particularly adapted for wood working plant or furniture factory. Address 6137 care Manufacturers Record.

PATENT ATTORNEYS

PATENTS, TRADE-MARKS AND COPYRIGHTS.—Write for our Free Illustrated Guide Book and EVIDENCE OF CONCEPTION BLANK. Send model or sketch and description of your invention for our opinion of its patentable nature free. Highest references. Prompt service. Reasonable terms. Victor J. Evans & Co., 712 9th St., Washington, D. C.

PATENTS—Booklet free. Highest references. Best results. Promptness assured. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

PATENT SENSE

"The Book for Inventors and Manufacturers." FREE. WRITE LACEY & LACEY, Dept. 15, Washington, D. C. Est. 1869.

INVENTORS—Send sketch or model of your invention, for opinion concerning patentable nature, and exact cost of applying for patent. Book, "How to Obtain a Patent" sent free. Gives information on patent procedure and tells what every inventor should know. Established 25 years. Chandler & Chandler, 412 7th St. N.W. Washington, D. C.

AGENCIES WANTED

MANUFACTURERS' AGENTS.—Wanted in every industrial state, acquainted with the trade to sell a high grade complete line of OXY-ACETYLENE WELDING AND CUTTING EQUIPMENT. Address No. 6134 care Manufacturers Record, Baltimore Md.

WANTED:—A side line to carry in connection with present line—preferably biologics, pharmaceuticals or drug sundries in five states: North Carolina, South Carolina, Georgia, Alabama and Florida. Address P. O. Box 1533, Atlanta, Ga.

SITUATIONS WANTED

Superintendent or Asst., age 40 technically trained, 18 years practical field experience in construction, operation, and maintenance of crusher and concentrating plants with power installation—competent in quarry and pit operation, efficient training and organizing of operating crews, available now. A. 1 references. Address No. 6133 care Manufacturers Record, Baltimore, Md.

YOUNG MAN.—For past 12 years engaged in teaching desires change to business line. Manufacturers or distributors of high-class products who wish widely acquainted resident representative in Shenandoah Valley of Virginia are invited to investigate. Address P. O. Box 193, Harrisonburg, Va.

WANTED: Position to operate an Austin Trench Machine or Filler. Go anywhere. Can furnish best of references.
P. O. Box 47,
College Park, Md.

CONSTRUCTION ENGINEER. Specialize handling construction work for owner. Save contractor's profit and get a better job. Years of successful experience in Southeast. Efficient organizer. Salary \$300 monthly. Address No. 6136 care Manufacturers Record, Baltimore, Md.

SITUATIONS WANTED

A position wanted by an experienced grading and track foreman, can also run a boarding camp for the laborers. Address No. 6135 care Manufacturers Record.

WANTED by competent secretary or manager, at very reasonable salary, connection with an ambitious Chamber of Commerce, Safety Council, or Publicity or Convention Bureau in a progressive city. Address No. 6126 Care Manufacturers Record.

MEN WANTED

Salaried positions \$2500 to \$25,000 upward; executive, technical, administrative, engineering, manufacturing, professional managing, financial, etc., all lines. If you are qualified, and receptive to tentative offers for a new connection, you are invited to communicate in strict confidence with the undersigned, who will conduct preliminary negotiations for such positions. A method is provided through which you may receive overtures in confidence, without jeopardizing present connections, and in a manner conforming strictly to professional ethics. Send name and address only; preliminary particulars will be sent without obligating or compromising you in any way. R. W. Bixby, Inc., 403 Lockwood Building, Buffalo, N. Y.

QUALIFIED EXECUTIVES, all lines, seeking new connections may use to advantage our confidential and individual service with fullest ethical assurance. Inquiries invited. Pen-Mac Co., Hendersonville, N. C.

MEN WANTED

"HELP WANTED.—Capable detailer and estimator for structural steel, ornamental iron and fireproofing specialties, etc. used in building construction. Opening also for salesman in above materials and contractors' equipment. Give experience, full personal data salary desired, date available, etc. in first communication. P. O. Box 46, Greensboro, N. C."

EXECUTIVES

Qualified men—Technical, Commercial or Manufacturing—seeking new positions find our effective and confidential service extremely satisfactory. Our Mr. H. H. Harrison can negotiate a suitable connection for you as he has done for thousands of others since 1909. Inquiries invited; confidences respected.

THE NATIONAL BUSINESS BOURSE, Inc.
Confidential Negotiators,
Association Building, Chicago.

SUBSCRIPTION SOLICITORS WANTED

In the South.
The MANUFACTURERS RECORD wants subscription representatives in every Southern community; alert, aggressive men who can give either whole or part time to the work. Liberal remuneration and attractive territories open. In submitting application please give age, experience in soliciting work, names and addresses of references and whether you are prepared to give all or part time and if only part time what lines you are now representing. Also please state if you are in a position to travel. Only applicants who are prepared to furnish the very best of references as to character and ability will be considered. Address: Circulation Department, Manufacturers Record, Box 548, Baltimore, Md.

MEN WANTED

LARGE and long established lumber company, having acquired interests in Mexico, wants business manager for Mexican operations. Not necessary to be lumberman, but must know how to figure costs. Address, with qualifications, salary expected, etc. No. 6132 care Manufacturers Record, Baltimore Md.

MACHINERY AND SUPPLIES

FOR SALE:—COMPLETE LIGHTING PLANT & WATER WORKS EQUIPMENT. Boiler: 1—100 HP 66"x16". R. D. Cole Co. now carries Hartford Insurance for 125 lbs., no patches or blisters. Half arch front all complete with stack and regular fittings.

ENGINE: Hamilton Corliss, 150 HP, 12 x 30 belt-fly wheel 10' x 18".

HEATER:—Cochrane Open Feed Water, 100 HP.

GENERATOR: 1—100 KW. 900 RPM. 2300 V., 3 PH., 60 Cyc., Ft. Wayne Belted with 5 KW. 125 V., 1800 RPM Ft. Wayne Exciter and with marble Sw. Bd. Panel with automatic oil Sw. and also control for street series lighting circuit.

REGULATOR: 1—10 KW, Ft. Wayne Series Street Lighting, 6.6 amps.

PUMPS: 2—8 & 12 & 8 1/4 x 15" Platte Iron Wks., Duplex Compound Steam Water Works Pumps.

PUMP: 1—6 & 4 x 6" Gardner Duplex Boiler Feed Pump.

BELTS: 2—16" Heavy Double Endless Leather, each about 80' long.

All of the above equipment is in very good condition, just recently taken out of service on account of new crude oil plant installed.

CITY OF MILLEN, GA.
City Engineers.

**SPECIAL ADVERTISEMENTS
OF GENERAL INTEREST**

SOUTHERN TRAFFIC SERVICE, Inc.

Quotations
Routings
Rate Adjustments

Claims:

Reparation
Overcharge
Loss or Damage

Activities Confined to Traffic Which Originates in, or Terminates in, or Moves Between Points in, Southern Territory.

1001-2 Murchison National Bank Building
WILMINGTON, N. C.

WONDERFUL BARGAIN

Brick factory with 7 acres valuable land in city limits of Frederick, Md., Electric lights, city water. B. & O. switch alongside property. Pennsylvania freight station nearby. Can be bought in entirely easy terms at less than value of buildings. Floor space about 20,000 sq. ft.

SECURO COMPANY, INC.
9 E. Lexington St. BALTIMORE, MD.

Telephone Calvert 4442

**SUPERINTENDENT
WANTED**

A good practical Semi-technical man for local Superintendent for Sulphur-fertilizer plant in Texas. Should be able to lay Service railroad, operate a narrow gauge line with gasoline engine motor, know how to quarry rock, and handle it through the mill which consists in grinding dry in a Hardinge conical mill, and sacking for shipment. Good chance for advancement as business is growing.

Address A-287 Care Manufacturers Record, Baltimore, Md.

GLASS MANUFACTURER WANTED

A thoroughly modern glass plant, 42 ton capacity, splendidly located for distribution and favorable freight rates. Want experienced man in glass manufacturing with some capital to invest. Local capitalists will finance behind right man. Must have proven business ability and be of unquestioned integrity. A very unusual opportunity.

Address A-290 Care Manufacturers Record Baltimore, Md.

FOR SALE

Fully Equipped Manufacturing Plant

Making an established line of plows, harrows, cultivators, etc. Located in Southwestern Ohio. Two railroad sidings, 85,000 sq. ft. floor space. 3 1/2 acres land. Brick buildings. Will sell plant and business separately.

The Long & Allstatter Co., Hamilton, Ohio

BLUE BOOK OF SOUTHERN PROGRESS

Many individuals and organizations have distributed copies of this book by the hundreds. It is crammed full of facts and figures of the South's resources and development that Business men could study with profit. Single copies 50c.

Manufacturers Record,

Baltimore, Md.

**Free Sites for Manufacturing Plant,
Cotton Mill Preferred**

The Chamber of Commerce of Mocksville, Davie County, N. C., offers 10 acres free, 40 acres adjoining at \$50.00 per acre, 150 acres available in suburbs of city on rail road, ideal location. Other sites available for all kinds of enterprises, large or small. Electric power available. Healthy climate. Tax adjustments. Correspondence solicited.

D. H. HENDRICHS Sec'y
Chamber of Commerce, Mocksville, N. C.



Port Newark Bidders!

*Date of Sale for Army Supply Base
has been postponed to March 22nd*

Additional Land Offered

Unforseen developments have made it necessary to postpone the sale of the U. S. Army Supply Base located at Port Newark, N. J. This property, together with improvements and equipment, was originally offered for sale by Sealed Bids to be opened March 1st.

The new sale date will be 11 A. M. March 22nd., at which time Sealed Bids, in triplicate, will be opened in the office of the Quartermaster General, Room 2024 Munitions Bldg., Washington, D. C.

The Port Newark Booklet and all previous advertising approximately specify the equipment, improvements and terms of sale but additional land is now included in the sale. The total acreage is now 136.171 instead of 118.62. Approximately 18.078 acres of this land are occupied under lease which expires March 1st., 1925. Title to all buildings, improvements, trackage, etc., located on these 18-odd acres is invested in the lessee and all bidders should govern themselves accordingly. The original specifications of property and improvements stand with the exception of the addition of these 18-odd acres of land.

Send for amendment to original specification dated January 8th. This may be obtained at either of the following addresses: Q. M. Supply Officer, N. Y.; Intermediate Depot, 1st. Ave. and 59th. St., Brooklyn, N. Y.; Quartermaster on the premises, Port Newark Terminal, Port Newark, N. J.; Q. M. General, Room 2024 Munitions Bldg., Washington, D. C., or Chief, Sales Promotion Section, Room 2515 Munitions Bldg., Washington, D. C.

The Government reserves the right to reject any or all bids.

*Remember
the new date
March 22nd!*



WAR DEPARTMENT

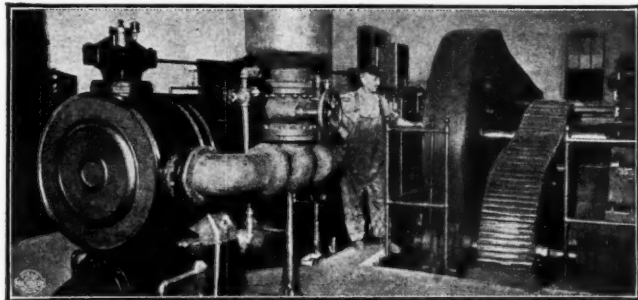


99% Efficiency

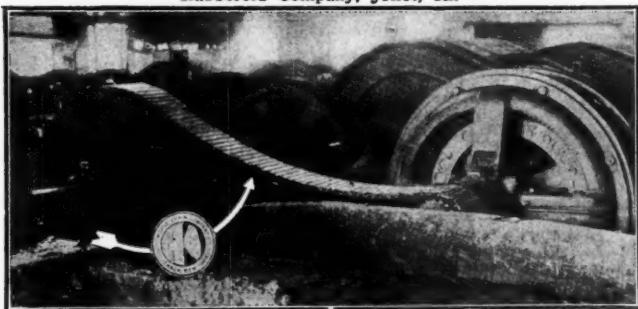
Morse frictionless "Rocker Joint" Silent Chains and Sprockets—a high speed, positive, and flexible drive of many and varied applications, which maintains an efficiency of over 99% by actual test, a claim that can be made by no other manufacturer of silent chains. From $\frac{1}{4}$ H.P. to 5,000 H.P. For High or Low Speed.



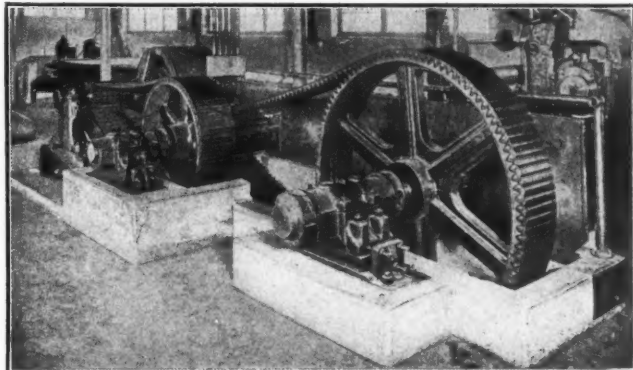
The difference between Morse Silent Chain and all other types is in that unseen and all-important part, the joint. The MORSE is constructed with the undeniable fact always in view—the joint must bear the burden of service in any chain. Instead of a single pin, as in other joints, two special pins, both seated, form the joint. No bushing is required. As the chain bends in circling each sprocket the curved side of one pin rolls or rocks against the broad, flat side of the other, eliminating destructive sliding friction.



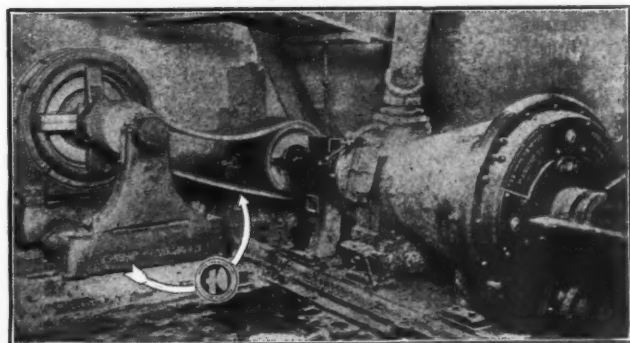
Roofing Paper Pulp Beater Engine, Morse Equipped at the Rubberoid Company, Joliet, Ill.



Pocono Rubber Cloth Company installation at Trenton, N. J.



125 H. P. Double Reduction Drive, Reverses Direction Every 45 Seconds.



Morse Installation at Congoleum Company, Asbestos, Md.

tion entirely. When on the straight run between sprockets, the flat sides of both pins are brought together, holding the chain steady and true.

Speed and Service

This exclusive "Rocker Joint" construction enables the MORSE to run at a speed far in excess of other chains because lubricant is not essential to its operation; and after years of hard service and severe tests (in nearly every line of industry) it is accepted as the most durable power transmission on the market.

ENGINEERING ASSISTANCE

Our corps of engineers with years of experience in designing and installing millions of horsepower chain drives will co-operate with you to solve your transmission problems.

This service is rendered gratis. Get in touch with our nearest representative NOW.

MORSE CHAIN CO.

Morse Engineering Service



Spring Sprocket

Write Today for Booklet

LARGEST MANUFACTURERS OF
SILENT CHAINS IN THE WORLD

Benefit by Morse Service as others do.

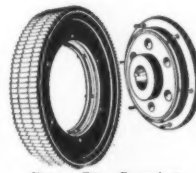
Address Nearest Office

ATLANTA, GA.....Candler Bldg., Earl F. Scott & Co.
BALTIMORE, MD.....1402 Lexington Bldg.
BOSTON, MASS.....141 Milk Street
CHARLOTTE, N. C.....404 Commercial Bank Bldg.
CHICAGO, ILL.....Merchants L. & T. Bldg.
CLEVELAND, OHIO.....Engineers Bldg.
DETROIT, MICH.....1361 Abbott St.
KANSAS CITY, MO.....Finance Bldg., Morse Eng'g Co.

NEW YORK CITY.....30 Church St.
MINNEAPOLIS, MINN.....So. 3rd St., Strong-Scott Mfg. Co.
MONTREAL.....St. Nicholas Bldg., Jones & Glasco Reg'd
PHILADELPHIA, PA.....612 Franklin Trust Bldg.
PITTSBURGH, PA.....Westinghouse Bldg.
SAN FRANCISCO, CAL.....Monadnock Bldg.
ST. LOUIS, MO.....Chemical Bldg., Morse Eng'g Co.
TORONTO.....Bank of Hamilton Bldg., Jones & Glasco Reg'd
WINNIPEG, MAN.....Dufferin St., Strong-Scott Mfg. Co.

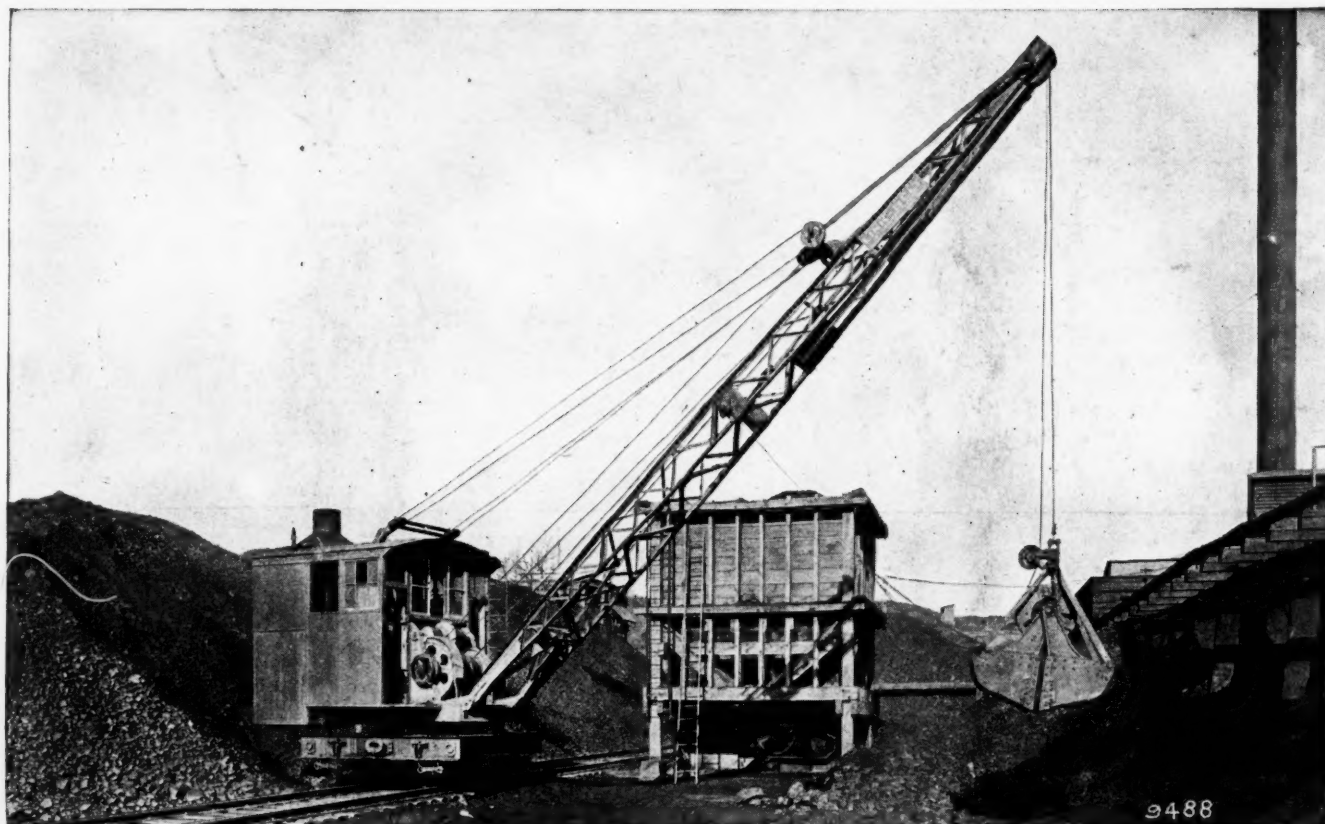
ITHACA, N. Y.

Assistance Without Obligation



Shear Pin Sprocket.

"MORSE" is the Guarantee Always Behind the Efficiency, Durability and Service.



HOW CAN I STORE COAL ECONOMICALLY?

THE recent coal shortage brought forth this question many times. We cannot all store coal and be prepared for the next emergency, but if your conditions permit, you should build an adequate reserve coal storage plant; build it on the Link-Belt System of coal storage.

Our most satisfied customers during the past year were those for whom we designed and built coal storage plants—some were very large plants, many were small. But they all paid large returns.

A Link-Belt coal storage plant is not an expensive proposition. You will be surprised, as have many of our present clients, at the comparative small outlay in dollars that will secure a plant to

safeguard your works against a fuel shortage.

Let us tell you whether or not you can store coal economically. Link-Belt engineers have studied coal storage from every angle. The benefit of their experience is yours for the asking. Writing us entails no obligation. We have aided many in the solution of their coal storage problem—we might be able to help you.

LINK-BELT COMPANY

PHILADELPHIA

New York . . . Woolworth Bldg.
Boston 9 . . . 49 Federal St.
Pittsburgh . . . 1501 Park Bldg.
St. Louis . . . Central Nat'l Bank Bldg.
Buffalo . . . 547 Ellicott Square

Wilkes-Barre
Huntington, W. Va.
Cleveland
Detroit
Kansas City, Mo.

2d Nat'l Bank Bldg.
Robson-Prichard Bldg.
429 Kirby Bldg.
4210 Woodward Ave.
306 Elmhurst Bldg.

CHICAGO

Seattle . . . 820 First Ave., S.
Portland, Ore. . . 101 First St.
San Francisco . . . 108 Second St.
Los Angeles . . . 163 N. Los Angeles St.
Denver, Lindrooth, Shubart & Co., Boston Bldg.

INDIANAPOLIS

Louisville, Ky., Frederick Wehle, Starks Bldg.
New Orleans, C. O. Hins, 504 Carondelet Bldg.
Birmingham, Ala.,
S. L. Morrow, 720 Brown-Marx Bldg.
DALLAS, TEXAS, 709 Main St.

Canadian Link-Belt Co., Ltd., Toronto and Montreal

H.W. CALDWELL & SON CO., CHICAGO

NEW YORK, Woolworth Bldg.

LINK-BELT

